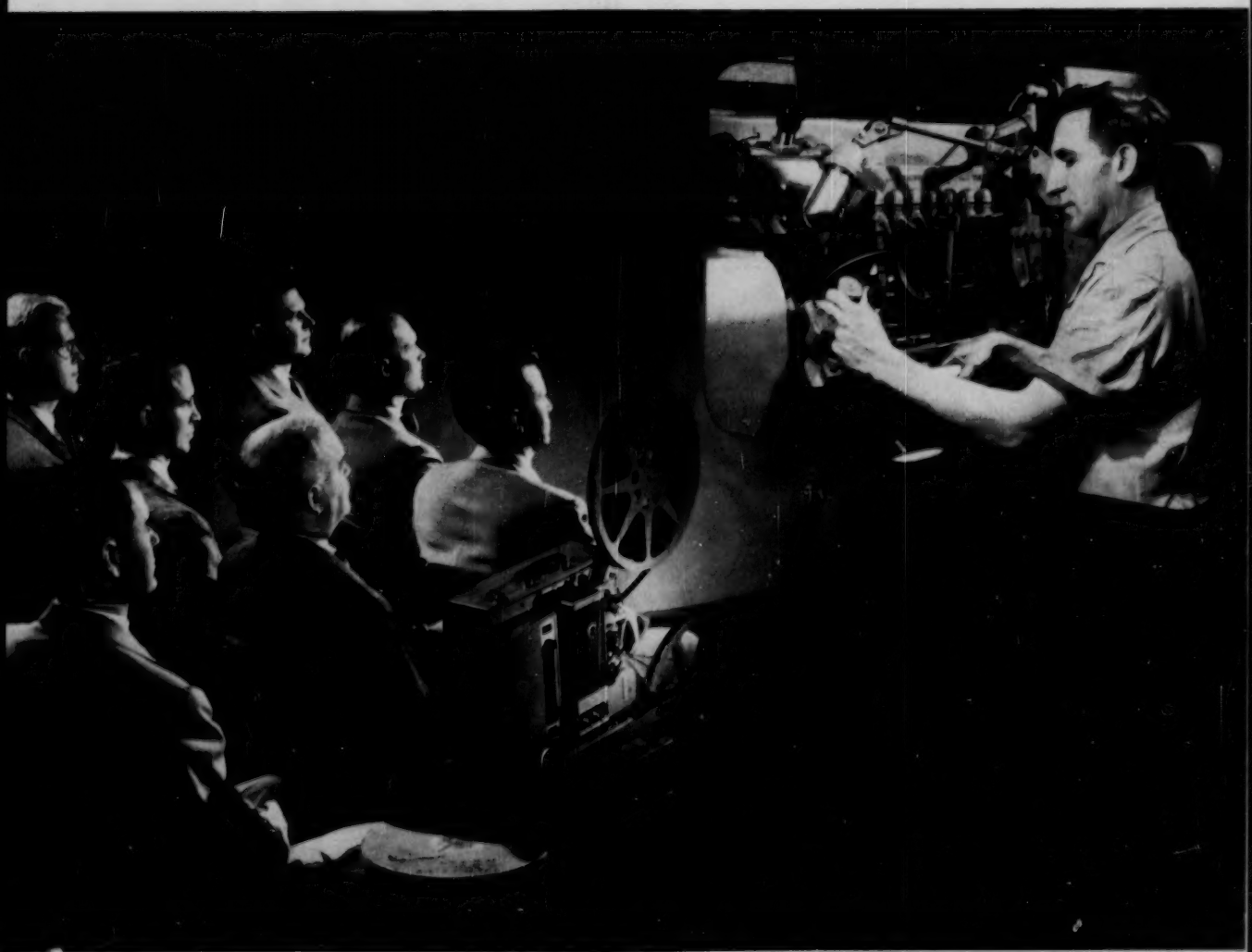
THE MAGAZINE OF

Standards



Motion Pictures
Improve with Standards (page 43)

FEBRUARY
1956

THE MAGAZINE OF
Standards

IN THIS ISSUE

February, 1956 **Volume 27, No. 2**

Published monthly by the

American Standards Association, Incorporated
70 East Forty-fifth Street, New York 17, N. Y.

Officers

H. Thomas Hallowell, Jr, *President*
Vice Admiral G. F. Hussey, Jr, USN (Ret), *Managing Director and Secretary*
Cyril Ainsworth, *Technical Director and Assistant Secretary*
G. P. Paine, *Director of Public Relations and Assistant Secretary*

Ruth E. Mason, *Editor* Sheila Dressner, *Production Editor*

Single copy 60¢. $7.00 per year (foreign $8.00). Schools and libraries $5.00 (foreign $6.00). This publication is indexed in the Engineering Index and the Industrial Arts Index. Re-entered as second class matter Jan. 25, 1954, at the Post Office, New York, N. Y., under the Act of March 3, 1879.

MARGINAL NOTES

Help on Standards—

Mechanical standards will feel the benefit of increased engineering personnel on ASA's staff. Vincent Grey, who has been on leave of absence to serve a tour of duty with the Navy, has returned as assistant to Sidney W. Taylor. Mr Taylor heads the mechanical engineering work of the American Standards Association. Mr Grey has been assigned to work with the Miscellaneous Standards Board and on such important projects as ball and roller bearings, small tools and machine tool elements, gears, gage blanks, pallets, and others. The work on ball and roller bearings and on tools includes international as well as national committee activities.

Vincent Grey

Sandia, Standards, and Materials—

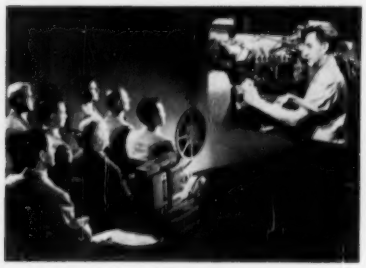
Sandia Corporation's "Special Weapons System of Standardization" (see article by H. C. Biggs, page 37) describes how laboratory standards are used for carefully controlled checking of materials and products during production.

The man who has had the greatest responsibility for Sandia's materials and standards program is John R. Townsend, head of Sandia's materials and standards engineering. He is a past-chairman of ASA's Standards Council and a past-president of the American Society for Testing Materials. His knowledge of materials recently brought him a special assignment — to solve the

country's scarce nickel problem (page 49).

Mr Townsend is seriously concerned about the effect of use of nuclear energy on all other materials. For a number of years he has urged that this question be considered now, before industry is faced with possible breakdown of equipment, disruption of pipe lines, and unforeseen disintegration of present production methods. The fact that a number of ASTM committees are studying the effect of nuclear energy on materials and test methods and the recent organization of a Planning Committee by ASA can be traced, at least partly, to his urgent requests for action.

The Front Cover



Standards for technical aspects of motion pictures of all types make it easier for amateur photographers to show good pictures on their home screens as well as aiding professional motion picture producers and exhibitors. The Society of Motion Picture and Television Engineers has a broad program of technical work in hand, including standards for television projectors, screen brightness, films for testing, sound tracks, film dimensions, and laboratory practice. SMPTE is sponsor for ASA Sectional Committee PH22 on Motion Pictures. Committee PH22 represents the USA viewpoint in the international committee, ISO Technical Committee 36, Cinematography. Those interested in additional technical details of the international work reported by Dr D. R. White in this issue (page 43) will want to read an article by Henry Kogel, SMPTE staff engineer, in the February issue of the *Journal of the SMPTE*.

This Month's Standards Personality

John E. Reeves, President of Reeves Brothers, Inc, has become the nation's leading exponent of using American Standards in the textile industry.

Last year his company's Bishopville Division finishing plant in Bishopville, S.C., was the first in the United States to offer the finishing of synthetic fabrics according to American Standard L22. The National Retail Dry Goods Association hailed this step as "a milestone in textile history."

This year John Reeves took a second, even more significant step. His company became the first manufacturer to adopt American Standard L22 for an entire line of synthetic fabrics. Beginning with the 1956 Fall line, all Reeves synthetic blend fabrics for men's and boys' wear will be identified as conforming to L22 end use requirements to assure apparel manufacturers, wholesalers, retailers, buyers, consumers, and drycleaners that the fabric has been tested to conform to established standard properties, such as colorfastness, shrink resistance, and tensile strength. Details will be given to indicate how the fabric will perform under washing, drycleaning, and pressing.

John Reeves joined Reeves Brothers in 1935 on graduating from North Carolina State College. He became superintendent of plants, and in 1951 was made vice-president and treasurer. In 1954 he succeeded his uncle, John M. Reeves, as president of the company with head offices in New York City.

As one of the leading manufacturers of synthetic fabrics, Reeves Brothers has built its reputation on high-quality products. No national standards of quality and performance were recognized in this field prior to the approval of L22 by the American Standards Association. As a result of fierce price wars, the quality of rayon and acetate fibers was frequently lowered. In many instances inferior quality of these fibers becomes apparent only when they are washed or drycleaned. The consumer and retail store were the losers, and the reputation of the rayon and acetate fabrics suffered.

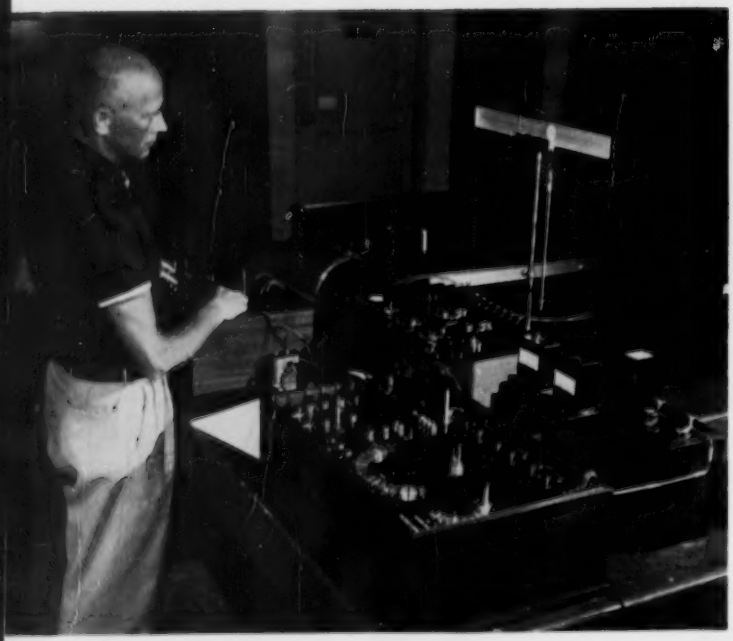
In order to maintain his name as a quality producer, John Reeves searched for a practical way to manufacture and finish the synthetic fabrics made by his company based on recognized performance standards. The search ended by adopting the American Standard L22.

"We are even more enthusiastic about it now than we were when we first considered it for our Bishopville plant," he says. "We think such standards are absolutely necessary to protect the interests of the consumer."

The American Standard Minimum Requirements for Rayon and Acetate Fabrics, L22, was developed under the sponsorship of the National Retail Dry Goods Association. It consists of 51 requirements for separate end uses and it lists 31 test methods for telling whether the fabric will be suitable for the particular end-use specified.

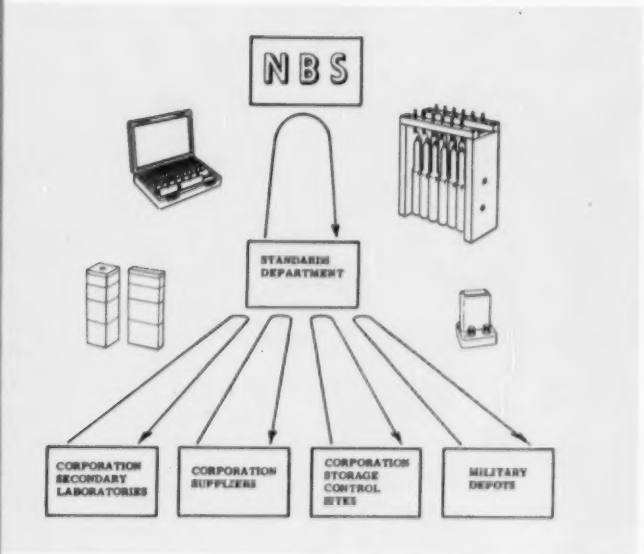
The *Special Weapons System*

TEMPERATURE *and humidity of Sandia Corporation's laboratories are controlled in accordance with careful tests. At left — a portion of the Metrology Laboratory.*



STANDARD *electric cells are checked (at left) with Sandia Corporation's bank of primary reference standard cells. Microwave impedance is being measured in laboratory above.*

# of Standardization



How *the "closed loop" method works—reference standards used by secondary laboratories are calibrated with Sandia's reference standards, which in turn are calibrated with National Bureau of Standards' primary standards.*

by H. C. Biggs
Manager, Physical and Electrical Standards Department, Sandia Corporation

THE production of atomic weapons differs from most other industrial production in three important ways. First, the complex production program is unusually decentralized. Second, the cost of failure is unusually high. And third, the need for interchangeability is unusually great.

These three factors necessitated the development of the Special Weapons System of Standardization, a system that is unique in American industry. Sandia Corporation, ordnance contractor for the Atomic Energy Commission, was given the task of developing and operating this system in 1953.

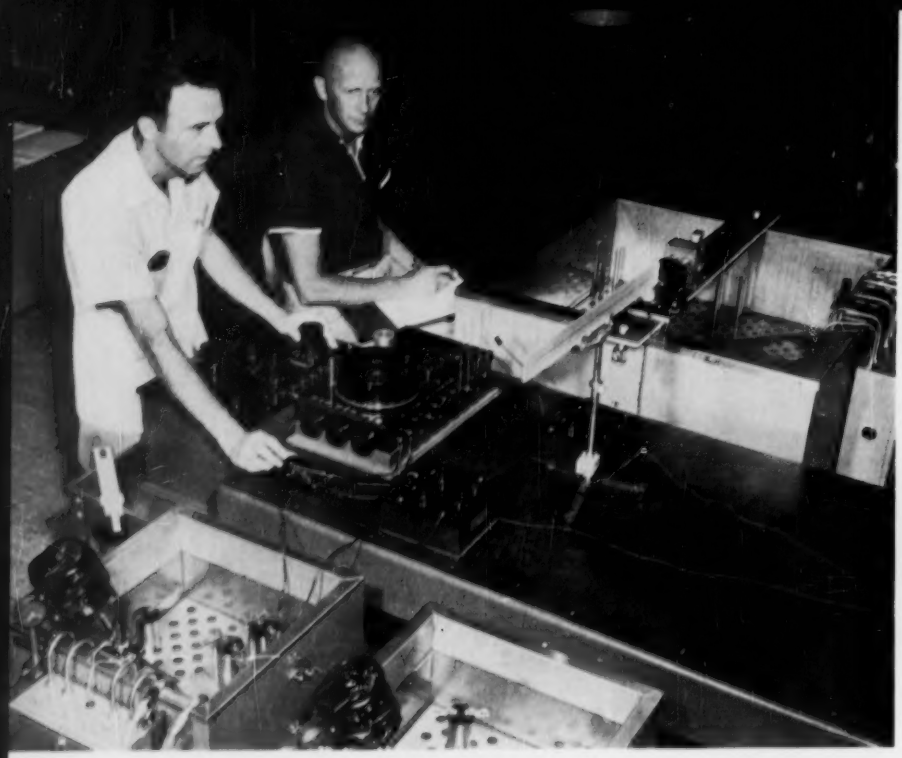
Suitable laboratory space to house the primary references used in the system was provided in the Sandia Corporation technical area at Albuquerque, New Mexico. The extent to which the temperature and humidity of the laboratories must be controlled to prevent adverse environmental effects was determined by tests. Standards equipment was tested in temperature-controlled chambers to determine the temperature range within which repetitive results could be obtained. These limits, somewhat narrowed to provide a margin of safety, were then used to establish the permissible temperature variation for the laboratories. Humidity is maintained at a level which protects the equipment from corrosion without causing severe physical discomfort to laboratory personnel.

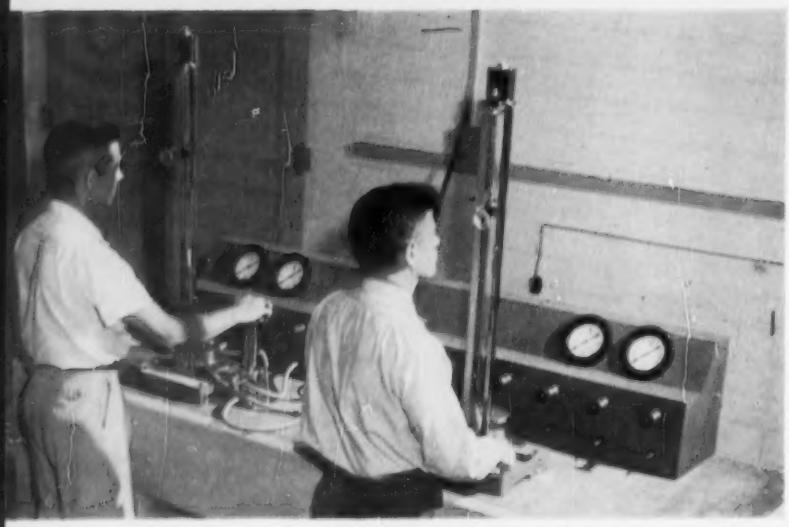
With the assistance of engineers and scientists at the National Bureau of Standards, equipment for the laboratory's two divisions was chosen to meet the special needs of the atomic weapon program. The physical standards division maintains references for pressure, temperature, humidity, length, mass, angles, surface finish, and gears. The electrical standards division maintains references for voltage, resistance, reactance, radiation, dielectric and microwave impedance, and attenuation.

The Sandia Corporation primary standards are frequently calibrated against the references at the National Bureau of Standards. This assures that all measurements made with instruments which have been calibrated against Sandia standards are in accord with national standards.

In addition to the primary standards laboratory, the Special Weapons System of Standardization includes a number of secondary standards laboratories. These are located where they are convenient for suppliers and for such Sandia Corporation groups as engineering, quality assurance, receiving inspection, field test, and the model shops. Reference standards needed to calibrate atomic weapon test equipment are also maintained by the military commands.

The closed loop method is used to keep the standards in the secondary laboratories in agreement with the





TEMPERATURE *characteristics of resistors used as reference standards by secondary laboratories are being checked with Sandia's reference standards (above). "Transfer" barometer is used for calibrating mercurial barometer at secondary laboratory (below).*

primary standards. Normally the secondary standards are brought to Sandia for calibration. If, however, there is a chance that a secondary standard might be damaged in shipment, a primary transfer standard is used. For example, the mercurial barometers used as a reference at the secondary laboratories are calibrated in the secondary laboratory against a "transfer" mercurial barometer. Before the transfer standard is shipped to the secondary laboratory, it is calibrated against the U-type mercurial barometer in the primary laboratory. The transfer standard is then shipped to the secondary laboratory, used to calibrate the secondary reference, and then returned to the primary laboratory. There it is again compared with the primary standard to close the calibration loop. Voltage standards are transferred in the same way. Frequent comparisons are also made among the several cells at the secondary laboratories to detect any that may have drifted from the nominal voltage value.

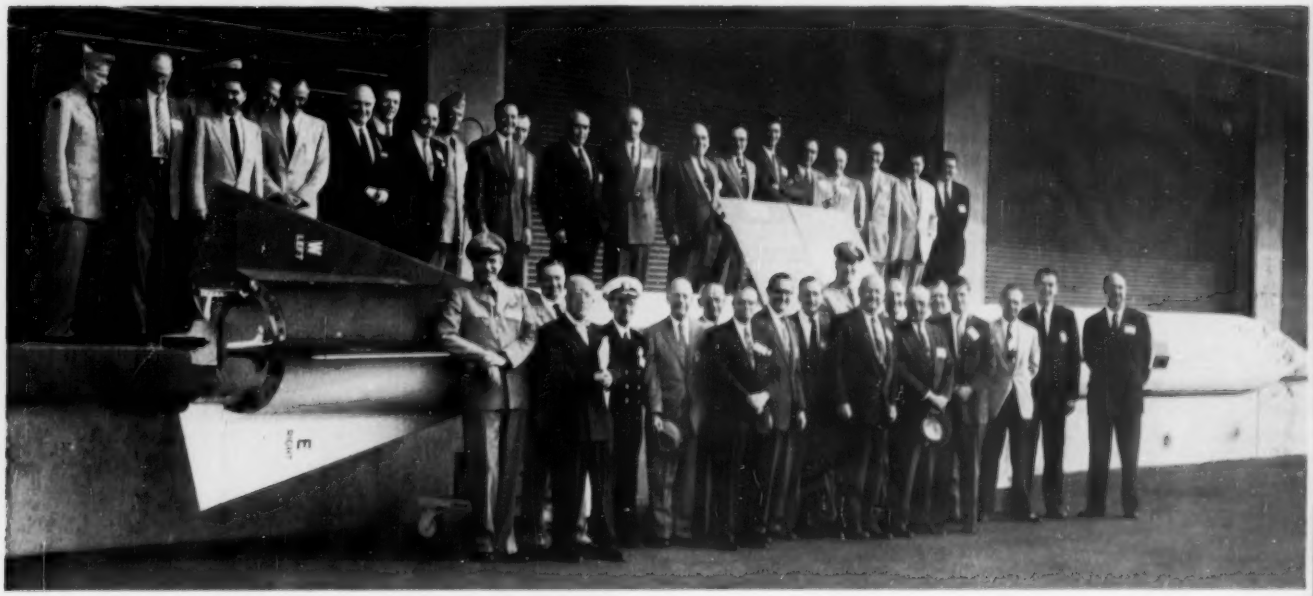
In order to assure that the standardization facilities are used to the best advantage, Sandia standards engineers study drawings of every atomic weapon component coming out of Sandia. This enables them to determine in advance of production whether or not the secondary standards are adequate for the required measurements. If the tolerances called for by the designer are unusually close, the standards engineers suggest to the designer that a note be placed on the drawing recommending that the supplier send his references to Sandia Corporation for certification. This service, offered without charge, assures the supplier that he is gaging his product by the same references which will be used by Sandia Corporation inspectors to accept or reject it.

This close study of the drawings for atomic weapons components also enables the standards laboratory to keep abreast of the need for new and improved standards equipment and techniques. Whenever it is possible and practical, the standards laboratory establishes the needed references. In some instances where the need has been urgent and no national standard was in existence, arbitrary standards have been set by the Sandia laboratory. As a result of these growing requirements, the technical scope of the Sandia laboratory is constantly widening.

This, briefly, is the Special Weapons System of Standardization. The system has proved that it is capable of doing the job. Properly used, it provides uniform standards for the entire atomic weapon program. These standards, in turn, can reduce the likelihood of costly errors and make possible interchangeability desired by the Atomic Energy Commission.

Technical publishing group asks———

Why Standardize?



THE TECHNICAL *Publishing Society's standardization symposium visits Firestone's Guided Missile Division—Front row (left to right): Major Raymond George, Los Angeles Ordnance District; Robert Q. Parsons, Century Engineers; Robert C. Geffs, Clary Corp; Capt F. C. Manville, INSMAT-Pomona-Corona; Hugh L. Clary, Clary Corp; Wm. H. Petit, Clary Corp; Carl W. Coslow, Plomb Tool Co; Robert F. Kuntz, Firestone; K. H. Booty, NOTS; Col J. E. Johnston, Chief, Los Angeles Ordnance District; Col W. S. Broberg, USA (Ret), Former Chief, LAOD; Samuel K. Rindge, Citizens National Bank; Lt Col Wayne D. McAlpine, Ft Belvoir, Va.; John D. Spalding, National Supply; Gordon B. Crary, Jr, E. F. Hutton & Co; R. F. Minning, Firestone; E. Melcher, Firestone; B. A. Bannan, Western Gear, Inc Rear Row, (left to right): Lt J. Hubbell, Army; Vice Admiral G. F. Hussey, Jr, USN (Ret), American Standards Association; Brig Gen Joseph Horridge, Aberdeen Training Command; John W. Rehard, Firestone; F. W. MacDonald, Firestone; Leonard Nederkorn, Aberdeen Training Command; Wm B. McGee, Hughes Aircraft; Robert W. Reniers, Standard Coil Products; J. Lewis Powell, Office, Secretary of Defense; Lt Col John H. Savage, Army Ordnance; Leonard K. Firestone, Firestone; L. J. Miller, Firestone; Representative Carl Hinshaw, U.S. Congress; General Omar N. Bradley, USA (Ret), Bulova Laboratories; A. N. Spence, U.S. Navy; Merritt Yancey, Firestone; Donald Byrn, 11th Naval District; James Harrison, Air Force; Richard Whitlock, Air Force; Hugh I. Gibson, Firestone; Paul Knight, Firestone; Edward A. Stearn, symposium chairman.*

PREPARATION of technical manuals, now almost a profession in itself, is the most recent field to take up the use of standardization as a tool.

The Technical Publishing Society, with headquarters in Los Angeles, has appointed a Standards Committee. It also chose to feature a Symposium on Standardization of Technical Manuals at its second annual fall technical meeting, October 15, 1955.

Two other national societies are active in the field of technical writing and publishing—the Society of Technical Writers and Editors with headquarters in New York and the Society of Technical Writers with headquarters in Boston.

Formerly technical writing and editing was considered by many in advertising and publishing to be the drudge of the publishing field. During the war, however, technical manuals issued by the Armed Services went through a face-lifting operation and writing of technical manuals became recognized as an important field of activity. Henry E. Marschalk, head of the Publications Branch of the Navy's Bureau of Ordnance, has explained this development. Speaking before the Conference on Scientific Editorial Problems of the American Association for the Advancement of Science in December 1954, he called attention to the fact that the vastly increased complexity of today's industrial machinery and weapons of defense make it essential that instruction books meet a new high of understandability.

"In short," he said, "our tech-

DR RICHARD RILEY, *UCLA, speaking. At table: Richard Whitlock, Executive Secretary, Air Force Committee for Improvement of Paper Work; James Harrison, Staff Director, Joint Congressional Committee on Printing; A. N. Spence, Chief of Publications, Navy; Donald Byrn, Director, Publications and Printing, 11th Naval District; Admiral Hussey, ASA; Edward A. Stearn, Assistant to Chief Engineer, Firestone Guided Missile Division, General Chairman of Symposium.*

ADMIRAL *Hussey called attention to American Standards currently available and useful in technical publishing.*

nical manuals must be engineered as carefully as the equipments they concern." This is a far cry from the concept widely entertained in the past that technical manuals can be a kind of "cheap and dirty" afterthought in a program involving design and production of costly and complex equipments, he commented.

The mistakes that are sometimes made because of deficient instruction manuals are reason enough to tackle this problem earnestly, Mr Marschalk pointed out. As an example he cited the crash of a commercial airliner that was traced to faulty instructions in a maintenance manual used in servicing the airplane. The Civil Aeronautics Board Accident Investigation Report covering this case explained: "Figure . . . illustrated the idler as a straight-designed component where-as the actual part is curved, and depicted the forward and rear push-pull rods incorrectly in their inboard and outboard relationship. Instructions . . . of the same publication referred to this figure for removal and installation purposes. From this figure, . . . , correct positioning of the idler could not be determined."

Mr Marschalk commented: "Here seems to have been a good example of the importance to industry, and to the lives of the public dependent upon that segment of industry, as to the need for good and foolproof technical manuals. There must be countless other examples involving anything from the frustrations of a housewife when her newly purchased can opener is supplied with confusing instructions, to some major loss involving many lives and costly property."

Vice Admiral G. F. Hussey, Jr, USN (Ret), Managing Director of the American Standards Association and a member of the Advisory Board of the Technical Publishing Society, was keynote speaker for the TPS meeting. Speaking as a former Navy man and former chief of the Navy's Bureau of Ordnance, he pointed to the change that has taken place in technical manuals. In the early days, technical manuals "were written by engineers for engineers," he said. However, he explained, when World War II came along and the Navy turned to the automotive industry for some of its major production solutions, "it was only natural that we should look to those same companies for the technical manuals to go along with the equipment they were turning out." "It was only natural," he continued, "that they in turn should confide the problem to those on their staffs who had produced car owners' manuals. The result was fairly electrifying. We shortly found ourselves circulating manuals on 20-mm guns, 40-mm guns, and aircraft torpedoes of the kind that brought the boys around saying, 'Papa, buy me one of those.' Ordnance pamphlets were being made readable as well as useful."

Immediate occasion for the symposium on standardization staged by the Society of Technical Publishing was publication of the Defense Department's Military Standard on Technical Manuals, MIL-STD-218. This is in three parts. Part 1 is a general outline; Part 2 covers artwork; and Part 3 is on preparation of manuscripts. The Manual became effective July 1, 1955.

Charles J. Eiwen, Staff Engineer of the Standardization Division, Office of the Assistant Secretary of Defense (Supply and Logistics), explained that the standard is part of the general standardization program being carried out by the Department under Public Law 436 of the 82nd Congress. This law, which created the Defense Supply Management Agency in the Department of Defense, specifies that the

agency's function is standardization of items used throughout the Department of Defense, "to the highest practicable degree possible."

All interested activities in the Department of Defense were represented on the committee that prepared the manual. The committee limited its work to publications directly related to the operation, maintenance, installation, and overhaul of military equipment. Its purpose was to develop a uniform policy on the acceptance of commercial manuals. Two working groups, one on format and definitions, the second on content of manuals, were set up to develop the standard.

The manual as completed emphasizes standardization of nomenclature, establishes a general policy for the Defense Department on the use of commercial manuals, gives a general outline of contents, sets standards for artwork, and outlines requirements for manuscripts. Under the Department's new plan for standardization, the Department of the Air Force has been given responsibility for standardization of technical manuals.

As Mr Eiwen said: "With the rapid change in technology, a technical standard can quickly become worthless if it is not kept up-to-date. New printing and reproduction methods are appearing; new pictorial concepts are developing; new ideas for presenting data are emerging. Our standards must be revised to keep up with technical developments."

In Admiral Hussey's discussion of his keynote subject "Why Standardize?" his answer was, in brief: "First, to insure that no essential information is omitted from a technical manual. Second, to relieve the creative mind of the author preparing the technical manual from the chore of devising his own schemes for abbreviations and graphical representations, and the added chore of explaining those schemes so that they may be interpreted in accordance with his intent. Third, to simplify the production of a technical manual adequate for its purpose and as economically as consistent with that purpose."

The facilities of the American Standards Association are available should it be desired to establish a committee bringing together all parties having an interest in the development and use of technical manuals, he said. "Such standards would become tools for the writers of technical manuals—tools to serve them in the first instance and tools to be resharpened through revision in order that they may be always suitable for the solution of the problem in hand," he explained.

Among the American Standards already approved and published, there is a substantial list of standards for application in the writing of technical manuals. Admiral Hussey called particular attention to the American Standards in the Y1 series on abbreviations, the Y10 series on letter symbols, the Y15 series on charts and graphs, and the Y32 series on graphical symbols. The Y1 series provides standard abbreviations for scientific and engineering terms and for use on drawings. In the Y10 series there are American Standard letter symbols for aeronautical sciences, radio, metereology, acoustics, mathematics, hydraulics, mechanics of solid bodies, heat and thermodynamics including heat flow, electrical quantities, physics, structural analysis, and chemical engineering. Symbols for rocket propulsion and feed-back control systems are nearly ready. In the Y15 series on charts and graphs there are standards on engineering charts for lantern slides, a manual of design and construction for time-series charts, and engineering and scientific graphs for publications. There are also graphical symbols in the Y32 group for electrical diagrams; welding; plumbing; pipe fittings; valves and piping; heating, ventilating, and air conditioning; railroads; and heat power apparatus.

The American Standards Association was called on to use its committee procedures to help the Bureau of Ships a number of years ago in developing standards for laboratory reports. The result was the Bureau's Standardization Manual, Standardized Requirements for Bureau of Ships Technical Reports, NAVSHIPS 250-350. This differs from the Military Standard in that it recommends standard format and organization, manuscript preparation, and requirements for reproduction of reports issued by the Bureau's laboratories, whereas the Military Standard deals with instruction manuals and operating handbooks.

Objective of the Bureau of Ships' standard was to "determine how much uniformity of presentation is necessary in order to make the most effective use of laboratory findings." A committee organized in accordance with the procedures of the American Standards Association brought to bear current thinking outside the government as well as within. A prerequisite for inclusion of any item in the manual was that it must result in some kind of advantage,—a saving in time or money, or an improved utilization of reports, for example. It was recognized that the laboratories do different kinds of work and have different reproducing facilities available. The manual therefore has two kinds of material—required standard practice and recommended practice.

The Bureau of Ships' Specification 16B16, Instruction Books for Ship or Shore Electronic Equipment, is now being revised in accordance with the new Military Standard 218, Mr. Eiwen declared. The new edition will be a Military Standard, to be identified as MIL-M-16616, and will closely reflect MIL-STD 218.

Three panels discussed the fields of writing, art, and production and reproduction at the afternoon session of the Technical Publishing Society's meeting. The discussion brought out a criticism of MIL-STD 218 to the effect that "in some of the inter-Service compromises, the problems of contractors, publications people, and—above all—the 'users,' have apparently been subordinated." It was the belief that

(*continued on page 60*)

Microfilm Studied by International Committee

by Donald C. Holmes
Chief, Photoduplication Service, Library of Congress;
Chairman, ASA Sectional Committee PH5,
Photographic Reproduction of Documents.

Donald C. Holmes

As an important preface to the 1955 meetings of the International Organization for Standardization held in Stockholm in June, 1955, Subcommittee 1 on Documentary Reproduction, of ISO Technical Committee 46, met in Paris, June 2-4. The meeting was held at the headquarters of the Association Francaise de Normalisation (AFNOR), where adequate meeting space and translation personnel were provided. Donald C. Holmes, Chief of the Photoduplication Service of the Library of Congress, and Marion E. Russell, Manager of the Color Print and Processing Department of the Eastman Kodak Company, represented the United States.

Delegates were present from Belgium, France, Italy, the Netherlands, the United Kingdom, the USSR, and the United States. The Netherlands Standards Association, HCNN, which holds the Secretariat of Committee ISO/TC46; the Federation of Library Associations International, FIAB; the International Documentation Federation, FID; and UNESCO were represented by observers.

Mr R. Frontard, Director of Administration of AFNOR, was chosen as the permanent chairman for the meeting. Satisfaction was expressed on the presence of the two American delegates. With necessary preliminaries concluded, attention was directed to the principal business in hand: discussion of standards for microfilm and microfilm readers for 35mm microfilm, the ISO test object and micro test object, the program of work for the interval between meetings, and the closer liaison of the work of documentary reproduction with that of photography.

In a detailed examination, the committee modified several sections of the draft proposals on 35mm microfilms and their readers, requesting that such changes be embodied in new resolutions for later submission to the member countries. Specifically, an addition was made concerning film thickness (0.14mm maximum recommended); a working party of one representative each from France, the United Kingdom, and the United States was detailed to formulate new proposals to the Secretariat concerning a universal standard for spindle holes. Magnification ratios, illumination, image positioning, and frame and film dimensions were given careful study. Observations from member countries in the matter of screen brightness were scheduled for reception by the Secretariat not later than December 31.

The committee noted the observations from the member countries on the advisability of continuing work toward the recommendation of an ISO test object and micro test object. An important compromise was suggested by the American delegation that the proposed ISO test object and the parallel line pattern used extensively in the USA be combined in order that the best features of both be made available on an international scale. Continued study with resultant comment by December 31 on this whole problem of test objects was requested from member countries with the later formulation of another draft resolution as the objective.

In general, the Secretariat was instructed to carry on the work now in progress, and to add to its activities a study on the preservation of microcopies on the basis of a United Kingdom recommendation.

In the important matter of a better liaison between documentation and photography, Mr Frontard was instructed to report to ISO/TC42, Photography, at its Stockholm meeting, that the necessary coordination can only be adequately established by a specialized subcommittee.

In conclusion, it should be noted that these sessions of Subcommittee 1 of TC46 were felt to be uniformly successful, and characterized by an encouraging degree of compromise on the part of all representatives.

DR WHITE (standing) *is shown presiding at the Stockholm meeting of ISO Technical Committee 36 on Cinematography. At table, left, J. W. McNair, Assistant Technical Director, ASA; at right, M. Rambal, ISO secretariat; Miss H-M Wagner, interpreter.*

Progress toward

International Motion-Picture Standards

by D. R. WHITE

Dr White is with the Research Division, Photo Products Department, E. I. duPont de Nemours and Company, Inc, Parlin, N. J. He is chairman of ASA Sectional Committee PH22 on Motion Pictures and was head of the U. S. delegations to two meetings of Technical Committee 36, Cinematography, of the International Organization for Standardization. The first of these meetings was held at New York in 1952 and the second at Stockholm, Sweden, in June, 1955. This report on the international work on motion picture standards was presented at the October, 1955, convention of the Society of Motion Picture and Television Engineers. It was published in full in the Journal of the SMPTE, *November* 1955.

The American Standards Association holds the secretariat for ISO Technical Committee 36.

THERE are genuine business values in voluntary international activities just as there are business values in our own voluntary national standardization efforts. In both cases, compliance is termed voluntary but the meaning is different from country to country. In the USA, voluntary compliance with a standard clearly means we are free to comply or not as we wish. A buyer who wishes to purchase goods in accord with a given standard can place that requirement in a purchase order and compliance then becomes a matter of contract. On the other hand, engineers can plan a new balance of picture area, soundtrack and perforation dimensions, and that new system can compete with older systems without the mere existence of older standards being a complete bar to progress.

There are countries where this description does not apply. In some cases standardization is considered a function of government. Compliance with a standard set up within a given country can become a matter of law; therefore, in such a case the voluntary acceptance of an international proposal is then not an individual acceptance but is a national acceptance.

These differences in viewpoint and procedure enhance rather than lessen the importance of timeliness in standardization activities. If delayed too long, diverse proposals become law in different countries and agreement on any one proposal becomes very difficult. If started too early, the need is not sensed in all countries and there is a resulting lack of cooperation. Examples of

each type could be cited from our Stockholm experience at Stockholm.

The meeting in 1952 was the first meeting of its kind, and while significant work was accomplished, subsequent events showed opportunities for improvement in organization and handling of details that had kept the paper work slowed to a snail's pace. This was true even in areas where agreement appeared to have been reached at the meeting. Omitting the many details, suffice it to say that the organization of the 1955 meeting benefitted from the 1952 experience and we hope and expect that follow-up work will proceed much more expeditiously.

Before proceeding with the detailed account of progress and status, I would like to outline to you recognized distinct steps of progress named and designated in ISO procedure.

A Draft ISO Proposal is a document prepared by the Secretariat of a Technical Committee and circulated for consideration by the members of that Committee. Typically, a date is set, and unless criticism is received before that date, approval is assumed for participating members. In case criticism is received which appears pertinent, the secretariat can prepare 2d, 3d, 4th, . . . Draft ISO Proposals and circulate them until approval is indicated by a majority.

At this point, the document becomes a Draft ISO Recommendation and is submitted to the ISO General Secretariat, together with a resume of the background. The General Secretariat then circulates the Draft ISO Recommendation to all ISO member countries and again sets a closing date for action.

If a majority approves, a final report is prepared for review by the ISO Council, which decides whether the Draft ISO Recommendation should be accepted as an ISO Recommendation. An ISO Recommendation so accepted can be a good and effective working basis for international business in the area covered.

Procedural steps also exist for the transformation of an ISO Recommendation into an ISO Standard by steps requiring unanimous agreement of all ISO member nations. No such ISO Standards exist as yet.

As a result of the New York meeting of 1952, 22 Draft ISO Proposals had been prepared by Technical Committee 36 on Cinematography and received the approvals necessary for the preparation of the corresponding Draft ISO Recommendations. Seven of these Draft ISO Recommendations were circulated early enough so that the period for their consideration had expired prior to the Stockholm meeting. In each case, the official U. S. position was "approval."

Standardization by a body of experts representing all interests and working in constant contact with the facts is our modern substitute for the process of the common law, and if this process is conscientiously and intelligently carried out it should have much the same qualities as the common law. — T. E. Veltfort, Manager, Copper and Brass Research Association.

Fifteen were circulated for consideration shortly prior to the Stockholm meeting with the period for consideration by national bodies due to expire September 20, 1955. These fifteen were given further consideration at Stockholm with the following results:

Three were allowed to stand unchanged.

Nine were referred to the Secretariat for revision and re-submission.

Three were ordered withdrawn for consolidation with new material not ready in 1952.

The three which were allowed to stand unchanged were submitted to letter ballot of ASA Sectional Committee PH22, Cinematography. Additional suggestions for improvements were received and action has been taken to assure the opportunity for this.

The Stockholm meeting resulted in agreement on the technical content of eight items to be prepared and circulated as Draft ISO Proposals as listed in the next column.

Number	*Subject*
1	Film Dimensions (16mm)
1	Screen Luminance
4	Magnetic - Track Dimensions and Locations
1	Reproduction Characteristics of Magnetic Soundtracks
1	Maximum Image Ratio and Location for Projection and Wide-Screen Pictures From Normal-Format Images

Seven of these are in the hands of the Secretariat and one is to be worked out in conjunction with a Permanent Working Group, as they were called at Stockholm.

These Working Groups of ISO Technical Committee 36 were charged with carrying out limited specific responsibilities assigned to them. Their work is expected to result in presentation to the Secretariat of documents recommended for circulation as Draft ISO Proposals. The Working Groups are composed of representatives of nations which appear to have primary interests in the specific area covered. Acting for the USA, I requested representation on all Working Groups formed. There were seven such groups set up to work in the following areas:

Film Dimensions
Definition and Marking, Safety Film
Screen Luminance
Films With Magnetic Striping
Reproduction Characteristics (Magnetic)
Wide Screen Pictures
Image Areas (16mm)

The men chosen to be the representatives of PH22 and, therefore, of the USA on the Permanent Working Groups are being instructed to:

1. Plan their work to agree with current activities of the appropriate Engineering Committee of the Society of Motion Picture and Television Engineers and PH22, and seek committee advice and guidance when necessary and desirable.

2. Clear policy matters with the chairman of PH22.

3. Provide the secretary of PH22 with copies of international correspondence.

Based on present experience, this will yield Draft ISO Proposals of good technical quality.

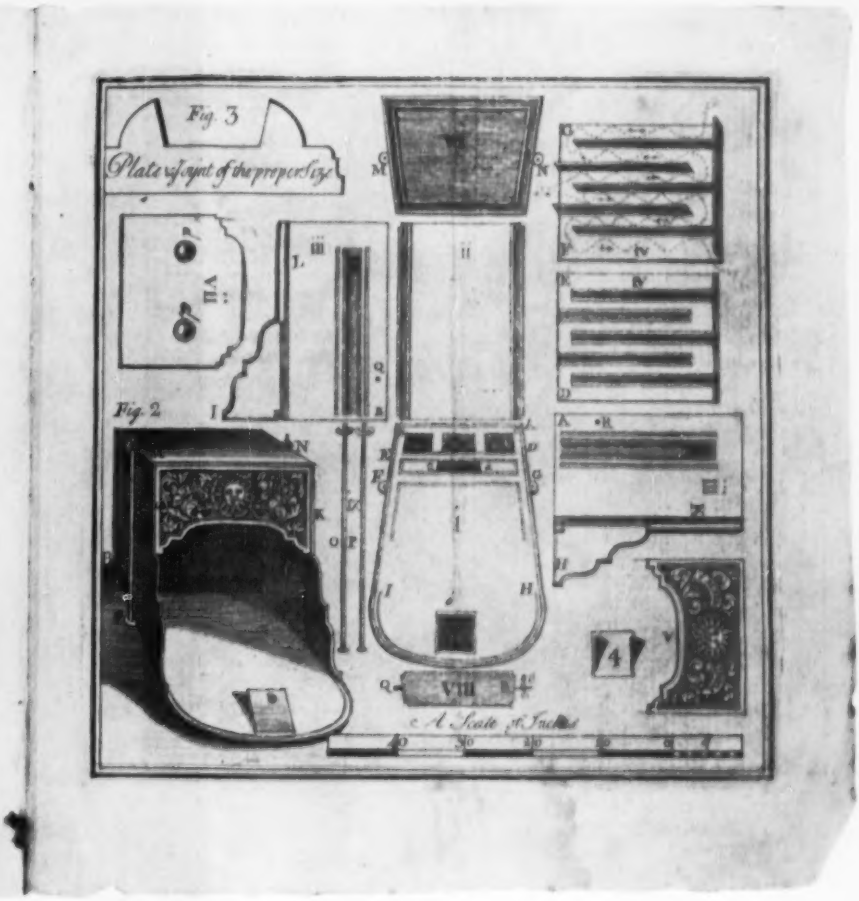
EXPLANATION of the PLATE,
Referring to the Pages where the several Parts are describ'd, or their Uses shewn.

	Page
i *The Bottom Plate*	14
ii *The Back Plate*	14
iii iii *The two Side Plates*	14
iv iv *The two Plates that make up the Air-Box*	15
v *The Front Plate*	15
vi *The Top Plate*	15
vii *The Shutter or Slider*	15, 20, 21, 22
viii *The Register*	16, 21, 22
Fig 2. *The Fire-Place put together*	16, 21, 22
3. *The Section of a Fragment of a Plate, shewing the quarter-round Reguleis that make the Joints*	14
4. *The Blower,* (*Bottom upwards*)	14
O P *The two Screw Rods*	21
2 2 *With the prick'd Lines, shew the Course of the Air thro' the Windings of the Air-Box.*	14

The Capital Letters shew the corresponding Parts of the several Plates.

On the DEVICE of the NEW FIRE-PLACE,
A SUN; *with this Motto,* ALTER IDEM.
i.e. *A second Self*; or, *Another, the same.*
By a Friend.

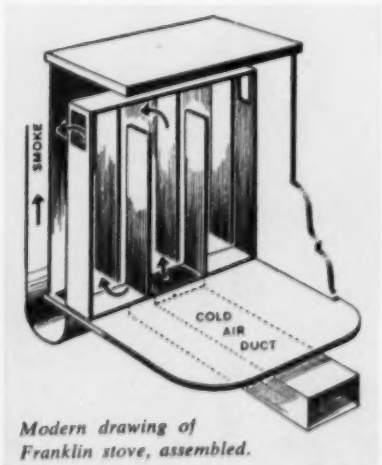
ANOTHER Sun! — 'tis true; — but not THE SAME.
Alike, I own, in Warmth and genial Flame:
But, more obliging than his elder Brother,
This will not scorch in Summer, like *the other*;
Nor, when sharp *Boreas* chills our shiv'ring Limbs,
Will *this Sun* leave us for more Southern Climes;
Or, in long Winter Nights, forsake us here,
To chear new Friends in t'other Hemisphere:
But, faithful still to us, this *new Sol's* Fire,
Warms when we please, and just as we desire.



Historical Society of Pennsylvania

Benjamin Franklin Pioneered *Decimal Inch Scales*

Life Magazine, Adolph E. Brotman



Modern drawing of Franklin stove, assembled.

THE use of decimals instead of fractions for inch scales is by no means a new development, although the American Standard for Decimal Inch Scales, Z75.1-1955, was approved and published late last year. Benjamin Franklin used a decimal inch scale in 1742 when he designed the now-famous Franklin stove (see Franklin's scale of inches on drawing).

Franklin's stove was the ancestor of all modern stoves and was a great improvement over the open fireplaces it finally displaced and the German stoves in existence about the same time. It was designed to be made of standardized parts which could be assembled easily in any fireplace. Fresh air was drawn through a floor duct into a separate chamber where it was heated by the surrounding fire and passed into the room through vents on either side. Smoke was drawn over the hot-air box and up the regular chimney.

Franklin boasted that his invention was more efficient than the German stoves, which heated only by radiation and not air circulation. It also gave better heat than an open fireplace with which, he said, "a man is scorched before, while he is froze behind."

Aluminum Producers Adopt Standard Thicknesses

A NEW schedule of thicknesses for alloy aluminum sheets adopted by The Aluminum Association and effective January, 1956, is in accordance with the American Standard Preferred Thicknesses for Uncoated Thin Flat Metals. The schedule complies with the 40-series of preferred numbers as recommended in the standard.

The new schedule, which covers alloys used primarily by the aircraft industry, was adopted by The Aluminum Association at the request of the National Aircraft Standards Committee.

S. D. Daniels, Technical Service, Aircraft Industries Association, comments: "This action represents the first example of a change in American industry from an antiquated system of sheet gaging to the new standard. As such it is a tribute to the progressive thinking and cooperation of aircraft and aluminum producers."

The American Standard was developed at the request of the Society of Automotive Engineers by a sectional committee sponsored by The American Society of Automotive Engineers to provide a standard series of thicknesses in place of the various gage systems. Many of these systems are still in use, however.

In announcing its adoption of the new schedule, The Aluminum Association states:

"All producers have agreed to adopt the new sheet standards for the thickness listed below [see next column] in 2024, Alclad 2024, and Alclad 7075 alloys in their present mill standard sizes:

Old Thickness (*in inches*)	New Thickness (*in inches*)
0.188	0.190
.156	.160
.125	.125
.102	.100
.091	.090
.081	.080
.072	.071
.064	.063
.051	.050
.040	.040
.032	.032
.025	.025
.020	.020
.016	.016

In order to give the producers sufficient time to incorporate these changes in their procedures and to acquaint all necessary personnel, these changes will be effective with all orders acknowledged for the January, 1956, and subsequent schedules.

For a changeover period of approximately six months on mill shipments and twelve months on warehouse shipments, airframe manufacturers have agreed to accept existing thicknesses as direct substitutes for the new thickness standards, the Association announces.

WHERE *uneven ends of aluminum are sheared off as metal moves down the "hot line," one of the steps in producing sheet aluminum.*

Aluminum Co. of America

HERE, *hot rolled strip moving along runout table from continuous mill in background travels along table and goes into a coiler. Coiled aluminum sheet is shown at right.*

Acoustical Standards Board Set Up

Plans to reorganize work

RECOGNIZING the broad range of standards being developed in the field of acoustics, the American Standards Association has organized an Acoustical Standards Board to coordinate and head up these activities. The first meeting of the Board was held December 1, 1955.

Dr Leo L. Beranek was elected chairman, with Wallace Waterfall as vice-chairman. S. David Hoffman, electrical engineer, American Standards Association, is secretary.

Dr Beranek is well known as an authority in the acoustical field. Now a member of the consulting firm of Bolt, Beranek, and Newman, Inc, and Associate Professor of Communications at MIT, he was for a number of years Technical Director of the Massachusetts Institute of Technology's Acoustics Laboratory. He is author of a number of books, including *Acoustics,* published in 1954 in McGraw-Hill's Electrical and Electronic Engineering Series. Dr Beranek is a past-president of the Acoustical Society of America. He has been a member of Sectional Committee Z24 on Acoustics, Vibration, and Mechanical Shock since 1948 and a liaison member of Commitee Z57 on Standardization in Sound Recording since 1947.

Mr Waterfall has been secretary of the Acoustical Society of America since 1929, executive secretary of the Acoustical Materials Association since 1949, and executive secretary of the American Institute of Physics since 1946. He is a Fellow of the American Physical Society and of the American Association for the Advancement of Science. In 1954 he received the Acoustical Society's first gold medal award. Mr Waterfall has been a member-at-large on Sectional Committee Z24 since 1933.

Leo L. Beranek

Wallace Waterfall

The broad scope of work now being done by Sectional Committee Z24 should be divided among a number of committees, the Board decided at its first meeting.

L. Batchelder, chairman of Committee Z24, was appointed chairman of a subcommittee to review the work in the field of shock and mechanical vibration and make recommendations as to possible reorganization in this field.

J. C. R. Licklider, Acoustical Society of America, was named chairman of a special subcommittee which was asked to consider the possibility of dividing the rest of the Z24 work and to review the present personnel of the committee.

Dr R. O. Fehr, General Engineering and Consulting Laboratory, General Electric Company, Schenectady, was named chairman of a committee to decide whether to take a more active part in developing codes for control of noise resulting from the operation of commercial products and affecting the general public. Some of the products affected include lamp ballasts, transformers, and air conditioners.

The work on sound recording being carried out by Sectional Committee Z57 has a close relation to the work on acoustics, it was pointed out at the meeting. The Institute of Radio Engineers, sponsor for Sectional Committee Z57, is being asked to review the scope of Committee Z57 and redefine it in view of present activities in Committee Z24 as well as Z57.

Safety Standards Board Elects Spence, Blackmon

Stanley F. Spence

Hendley Blackmon

STANLEY F. SPENCE, head of the accident control program of the American Cyanamid Company, has been elected chairman of the Safety Standards Board. The Board supervises and coordinates work on 56 projects for safety in industry, and for the general public under the procedures of the American Standards Association.

Hendley Blackmon, Engineering Manager of Association Activities for Westinghouse Electric Corporation, is new vice-chairman of the Board.

Mr Spence has been in the field of industrial accident and fire prevention since 1934. As director of safety and loss-prevention of American Cyanamid he has responsibility for the safety of more than 40 plants operating many different processes and with diversified products that number in the thousands.

He is a member of the Safety Committee of the American Society of Mechanical Engineers; a member of the Industrial Committee and the Flammable Liquids Committee of the National Fire Protection Association; a member of the General Safety Committee of the Manufacturing Chemists' Association, and general chairman of the Chemical Section of the National Safety Council. He is also a member of the American Chemical Society, the National Society of Professional Engineers, and the American Society of Safety Engineers.

Mr Spence is a graduate of the Newark College of Engineering with a B.S. in Electrical Engineering and is a licensed professional engineer in the States of New York and New Jersey. He has been a member of the Safety Standards Board since 1951, and of Sectional Committee Z16 on Methods of Recording and Measuring Work Injury Experience since 1952.

As Engineering Manager of Association Activities for Westinghouse Electric Corporation, Mr Blackmon has general responsibility for the broad engineering participation of the company in scientific, technical, and trade associations.

Mr Blackmon was graduated from the Georgia School of Technology in 1925 with a Bachelor of Science degree in electrical engineering. After a year in the Westinghouse Graduate Student Course, he was assigned to development work in the Switchboard Engineering Department. He was promoted to the General Engineering Department in 1928, and in 1932 moved to the Public Relations Department as Technical Editor of the company's Technical Press Bureau. He was appointed Manager of the Bureau in 1938, a position he held until 1945 when he resigned to join McGraw-Hill Publishing Company as Electrical Editor of *Product Engineering*. He was soon promoted to Managing Editor. Two years later he was appointed Managing Editor of McGraw-Hill's *Electrical World*.

He returned to Westinghouse in 1949 as Assistant Engineering Manager of the company's Association Activities, and in 1951 was appointed Engineering Manager. In 1942 Mr Blackmon was awarded the Westinghouse Order of Merit, the highest honor bestowed by the company on employees for outstanding work.

Mr Blackmon personally participates actively in the work of several societies and associations. A Fellow of the American Institute of Electrical Engineers, he serves on several national committees, including the Safety Committee, 1950-56, chairman 1951-52. He has also been a member of the Executive Committee of the American Society of Mechanical Engineers' Safety Division, 1950-55, chairman, 1954; member ASME Codes and Standards Committee, 1954; member NEMA Codes and Standards Committee since 1950, chairman 1952-55; member NEMA Safety Regulations Committee since 1951. He is a member of the ASA Electrical Standards Board, the United States National Committee of the International Electrotechnical Commission; and chairman of the USNC Subcommittee on CEE. He is an alternate on ASA's Standards Council and Mechanical Standards Board; representative on Sectional Committees C42, Y1, Y10, Z17, and Panel 1 of the National Electrical Code, C1. He is also a member of the National Fire Protection Association and the International Association of Electrical Inspectors.

NEWS BRIEFS.....

Early in January, 1956, a model demonstrating what the safely dressed American worker wears in mine rescue work started a tour of Latin American countries under the auspices of the International Cooperation Administration. With the model, popularly known as "Butch," went more than 2,000 pounds of safety equipment, and a large display of safety literature. The display shows how safe conditions are created in the United States. The American Standards Association cooperated in preparing the exhibit by supplying sets of American Safety Standards.

The exhibit features eight phases of industrial safety: head, eye, and face protection; protective clothing; respiratory protection; fire protection; machine guarding; standards; plant equipment maintenance; and environmental testing instruments. American Safety Standards are represented in much of the equipment used and are included among the pamphlets exhibited.

Under Secretary of Labor Arthur Larson (right) explains respiratory equipment to Alejandro Huizi-Aguiar, Commercial Counselor, Embassy of Venezuela.

John R. Townsend has been named by Defense Mobilizer Arthur S. Flemming to study the shortage of nickel and the outlook for future supplies. Mr Townsend is director of materials and standards engineering of the Sandia Corporation, and past-chairman of ASA's Standards Council. He is a past president of the American Society for Testing Materials.

Nickel is a vital material in jet planes, the atomic energy program, and many other military applications. It is an important alloying material to increase the strength and corrosion resistance of other metals, particularly at high temperatures. Mr Flemming explained that the study would put "particular emphasis on the defense position for this metal and the impact defense requirements are having on the civilian economy." Mr Townsend "will analyze all Government activities relating to nickel, including the stockpiling and expansion programs, as well as the set-asides for military and atomic-energy needs," Mr Flemming said.

ASA's Board of Directors has elected its Executive Committee with the following membership: J. L. Cranwell, Vice-President. The Pennsylvania Railroad Company; R. M. Gates, President, Air Preheater Corporation; A. S. Johnson, Vice-President and Manager, Engineering Department, American Mutual Liability Insurance Company, Boston; Van H. Leichliter, Vice-President, Operations, American Steel & Wire Corporation, Vice-President of ASA; and H. T. Hallowell, President of ASA, ex-officio.

The Standards Council of the American Standards Association has re-elected its chairman and vice-chairman—Arthur S. Johnson and T. E. Veltfort—for the year 1956. Mr Johnson is engineering vice-president of the American Mutual Liability Insurance Company. Mr Veltfort is Managing

The exhibit of protective clothing now touring Latin American countries features "Butch" wearing mine rescue equipment.

Director of the Copper and Brass Research Association.

Members of the Board of Review which acts for the Council on many questions of approval of standards and initiation of projects has the following membership for 1956:

L. W. Hill, President, Carolina Telephone and Telegraph Company, Tarboro, North Carolina. Representing the ASA Telephone Group.

W. P. Kliment, Engineer of Standards, Engineering and Research Divisions, Crane Company, Chicago, Ill. Representing the Manufacturers Standardization Society of the Valve and Fittings Industry.

Harold Massey, Assistant Managing Director, Gas Appliance Manufacturers Association, New York, N. Y.

Leon Podolsky, Technical Assistant to the President, Sprague Electric Company, North Adams, Mass. Representing the Radio-Electronics-Television Manufacturers Association.

J. D. Rogers, Assistant General Superintendent, Electric Transmission and Communication, New York, New Haven, and Hartford Railroad, New Haven, Conn. Representing the Association of American Railroads.

C. A. Willson, American Iron and Steel Institute, New York, N. Y. Representing the American Society of Civil Engineers.

C. E. Franklin, Electrical Engineer, Consolidated Edison Company, New York, N. Y. Representing the ASA Electric Light and Power Group (alternate.)

What Is Your Question?

This is the second installment of questions addressed to Willis S. MacLeod at the session on Relationships of Industry Standards and Specifications to Those of Government, during the Sixth National Conference on Standards. Mr MacLeod is Director of the Standardization Division, Federal Supply Service, General Services Administration. The questions have been answered by members of Mr MacLeod's staff.

It has been noted that most standardization work outside the military efforts does not establish standard part numbers and drawings by which the standard item can be purchased to, called out on installation drawings and also utilized in the planning, material control, and warehousing operations. Why are such standard part numbers not established? It appears such present standards efforts are incomplete.

All standards prepared to date have been on common use items which are available from several commercial sources. The matter of spare parts or parts peculiar has not been a factor.

The standardization of specific makes, models, or designs of common use items is not considered to be in the best interest of the Government or in conformance with existing regulations governing procurement. Such standardization would limit competition, raise costs, prevent utilization of technological advances of industry, and disrupt our sources of supply. The basic nature of the common use items does not require such strict control.

I firmly believe if a committee were set up to accept MIL-Q-5923B as a basic inspection specification for all services your problem could be greatly relieved. Can this be done?

This specification is for use on contracts of considerable volume where production of the item will be required over an extended period of time. It is not applicable to contracts for the general run of supplies. Representatives of the Army, Navy, Air Force, and Staff Director for Inspection and Quality Control, Office of Assistant Secretary (Supply and Logistics), Department of Defense have, for the past year, been discussing Departmental acceptance of MIL-Q-5923B. The Army and Navy have raised certain objections to the specification as written and a revised specification has been drafted but as yet has not been accepted. Legal questions have also been raised regarding incorporating certain requirements of the specification in a contract. It is hoped that during the coming year the differences of opinion in the military can be reconciled and a single specification, acceptable to all, issued. The Signal Corps and Army Ordnance each have versions of MIL-Q-5923B.

Everybody's Business

Chewing gum and surgical supplies are among the many interests represented by new ASA Company Members

Standards are everybody's business, no matter what the company nor where it is located. The list of new members of the American Standards Association includes companies that manufacture such a variety of products as chewing gum, radio and television sets, surgical supplies, and safety equipment for window washers. New ASA Company Members are:

Acker & Man, Inc, New York, N.Y.
Aluminum Specialty Company, Manitowoc, Wis.
American Car & Foundry Company, New York, N.Y.
Andale Company, Philadelphia, Pa.
Argus Cameras, Inc, Ann Arbor, Mich.
Automatic Screw Machine Products, Chicago, Ill.
Hugh J. Baker and Company, Indianapolis, Ind.
Baker & Coombs, Morgantown, W. Va.
Blaw-Knox Company, Pittsburgh, Pa.
Brown Company, Berlin, N.H.
The Burdick Corporation, Milton, Wis.
Capewell Manufacturing Company, Hartford, Conn.
Cinch Manufacturing Corporation, Chicago, Ill.
Columbia Broadcasting System, Inc, New York, N.Y.

Corning Glass Works, Corning, N.Y.
Glenshaw Glass Company, Inc, Glenshaw, Pa.
A. P. Green Fire Brick Company, Mexico, Mo.
Harshaw Chemical Company, Cleveland, Ohio
Hewlett-Packard Company, Palo Alto, Calif.
Johnson & Johnson, New Brunswick, N. J.
The LaBour Company, Inc, Elkhart, Ind.
McCloud Lumber Company, Minneapolis, Minn.
McKiernan-Terry Corporation, Harrison, N. J.
Matthiessen & Helgeler Zinc Company, La Salle, Ill.
Mesta Machine Company, Pittsburgh, Pa.
Schmidt & Ault Paper Company, York, Pa.
Sorensen & Company, Inc, Stamford, Conn.
Spencer Chemical Company, Kansas City, Mo.
Texas Foundries, Inc, Lufkin, Texas
United States Tobacco Company, New York, N.Y.
William Wrigley Jr Co, Chicago, Ill.
Zenith Radio Corporation, Chicago, Ill.

Industries no less than companies are making standardization an important activity through their associations, whether they are in the insurance business, produce hack saws, or have some interest in the future of atomic energy for industrial purposes. New Member-Bodies of ASA include:

The Atomic Industrial Forum, Inc
Cemented Carbide Producers Association
Federation of Mutual Fire Insurance Companies
The National Association of Automotive Mutual Insurance Companies
The Society of the Plastics Industry

New Associate Members of ASA include:

American Materials Handling Society
Bituminous Pipe Institute
Hack Saw Manufacturers Association of America
Magnetic Recording Industry Association
National Fluid Power Association

THE STEERING COMMITTEE OF THE PRESIDENT'S CONFERENCE—*Seated, left to right: Vice Admiral G. F. Hussey, Jr, USN (Ret) Managing Director, ASA, alternate for Mr Hallowell; Paul E. Gurske, Director, Bureau of Labor Standards; Secretary of Labor James P. Mitchell (chairman); Undersecretary of Labor Arthur Larson; Vincent P. Ahearn, Executive Secretary, National Sand and Gravel Association; General George C. Stewart, General Manager, National Safety Council. Standing, left to right: Lloyd A. Mashburn, General President, International Association of Lathers, Wood, Wire, and Metal Workers; R. H. Ferguson, Assistant Director of Industrial Relations, Republic Steel Corporation; Stanley C. Hope, President, Esso Standard Oil Co; H. E. Foreman, Managing Director, Associated General Contractors of America; R. O. Hunt, Vice-President in Charge of Operations, Crown-Zellerback Corporation; Edward L. Cushman, Vice-President and Director of Industrial Relations, American Motors Corporation; Ewan Clague, Commissioner, Bureau of Labor Statistics.*

President's Conference on Safety—
May 14-16, 1956

Two new committees are working on plans for the President's Conference on Occupational Safety which will be held in Washington, May 14-16, 1956.

The Technical Planning Committee, with a membership of outstanding safety authorities, has responsibility for the technical sessions. The Steering Committee, with a membership of top executives, is responsible for over-all policies.

Purpose of the Conference is to develop a report to President Eisenhower on methods of preventing injuries in work places. The President will address the conference.

Farm safety will be discussed during this year's conference for the first time. Programs for reaching small business through state safety services and community conferences will also be featured this year.

Among the speakers will be an authority on the safety problems connected with commercial application of nuclear energy.

The American Standards Association is represented on the Steering Committee by H. Thomas Hallowell, ASA President, and on the Technical Planning Committee by Cyril Ainsworth, ASA Technical Director.

Are These Cases Work Injuries?

Rulings of the Committee on Interpretations are now being issued on whether unusual cases are to be counted as "work injuries" under the new edition of American Standard Z16.1-1954. Title of the standard is Method of Recording and Measuring Work Injury Experience. Sponsors of Committee Z16 are the National Safety Council and the Accident Prevention Department of the Association of Casualty and Surety Companies.

Case numbers in this new series start with 400. The cases below represent the second installment in the series under the revised edition of the standard. The numbers in parentheses refer to those paragraphs in the standard to which the cases most closely apply.

An index is being prepared by the National Safety Council, arranged both numerically by case number and numerically by paragraph number of the standard. Each index reference will include a brief description of the case.

When the first 50 cases have been published, copies of the cases and the index will be made available at 50 cents per copy. Liberal discounts will be offered for quantity orders. Copies will be 8½ x 11 in. with margins for punching. Up-to-date indexes will be issued with each additional 50 cases.

CASE 408. (5.1)

An employee working as a helper on a construction job was going about his work in his usual manner. Apparently he did not do any excessive straining, but while he was doing his work he claims to have had a catch in his side. He claims he thought it was a "charlie-horse," or something, and didn't think it would amount to anything. He was working with two other men, but did not mention having strained himself to either of them, nor did he say anything to his foreman. He claims he did not even stop work, but rather worked on for several hours during the day.

After he reached home and had eaten supper he claims to have started having pains. He reported this the next morning and at that time was found to have a hernia.

Decision: This case should not be included in the work injury rates on the basis that this hernia does not meet all of the conditions of paragraph 5.1 of the standard.

CASE: 409.

Hypothetical case. No decision rendered.

CASE 410.

The employee concerned was removing frozen cherries from a container in a cafeteria department and using his hands to break up lumps of cherries contrary to his supervisor's orders which were to use a wooden paddle. Shortly after doing this work he reported to the Medical Department complaining of shoulder pains which were diagnosed as bursitis. This man had had a previous history of bursitis but it was felt that this constituted an aggravation of the existing condition and the company ruled it a work injury.

While out of employment because of bursitis, the employee returned to the Medical Department for a routine check of his condition and while in the vicinity of the Medical Department apparently stepped on a banana peel, slipped and fell, and was found unconscious in the hallway suffering from bruises and a mild concussion.

There is no doubt that this second occurrence was accidental but just how would this incident be counted in frequency and severity rates? Should this be counted as one injury and the severity determined on the basis of the total time lost or should the frequency be figured on the basis of two separate injuries?

Decision: This should be shown in the records as one injury, and all lost time as a result of both the original and the further injury from the fall should be included in the severity charge for this one injury. The committee agreed that this situation is not specifically covered in the standard, and suggests that the following be considered as an interpretation of the standard:

"If during disability from an accepted work injury an employee experiences a second injury attributable to the necessary treatment of the first injury, the second injury shall not be counted in the frequency rates, but the total lost time resulting from both injuries shall be counted as disability for the first injury."

CASE 411. (1.6)

On Thursday, March 10, an employee reported for work on the 11 to 7 shift. He punched his clock in at 10:30 P.M. Instead of reporting directly to his area of work at the hydropulper, he stated that first he desired to visit with a worker in the rag-cutting room. This is approximately 150 feet south of the hydropulper area.

Running along the west wall of the cutting room is a rag-cutting belt. This belt is approximately six inches below the floor level, and at the extreme south end of the belt is a pulley set in a pit. Sometime during the day in question the pit covering was removed for cleaning purposes. After the cleaning was completed, someone failed to replace the pit covering.

At about 10:40 P.M. on the day in question and before his regular starting time of 11 P.M., the injured employee fell into this open pit. Apparently none the worse for wear, he completed his working shift. He failed to notify his foreman, nor did he report for first aid. He stated that he did not think that there was anything wrong. At 8:30 A.M. on Friday morning, March 11, the Plant Nurse was notified by the employee's wife that he was unable to walk. He had a badly swollen knee that appeared wrenched or sprained, also there was a 4-inch abrasion on the skin.

He was paid a visit by the Plant Nurse and it was clearly apparent that he would be unable to report for work on his regular shift Friday night, March 11. X-rays revealed no bone damage but the physician confined him to bed and prescribed hot applications.

Decision: The injury should be included in the work injury rates. The actual injury arose out of a definite plant condition, and as the company was apparently willing for this employee to come in early and to talk with other employees, the injury is considered to have arisen out of and in the course of employment.

CASE 412. (5.14)

The employee in this case was bitten by a dog while performing his duties and was given a tetanus shot, an antitoxin, which locked the employee's bowels, causing gangrene to set in in the bowels. The employee was operated on and a large part of the intestines were removed because of the action of the tetanus shot. In view of the fact that the tetanus shot was the cause of the gangrene setting in and not the dog bite, the question concerned whether this case should be classified as a disabling injury arising out of and in the course of employment.

Decision: This injury should not be included in the work injury rates. This

decision is based on the fact that it was the doctor's opinion that the original injury inflicted by the dog did not in itself result in disability, but that the disability which did occur resulted solely from the tetanus shot.

Case 413. (5.3)

On February 14, an employee was stacking bags, working as part of the bin run crude sacking crew. This operation consisted of filling 100 lb bags with sulfur and stacking the bags on a pallet. Four men are assigned to this crew. One man fills the bag, a second man ties the bag closed with wire, and two men working together stack the bag on the pallet. The members of this crew rotate jobs frequently so that all men are involved in each operation. The bags are stacked one at a time and two men lift each bag.

On the following day, February 15, the employee in question mentioned that his right arm felt sore, but he did not attribute the soreness to any specific incident. In the days following, the arm did not clear up, but rather soreness increased and on February 18 he was sent to the clinic where two doctors examined him and diagnosed the condition as a muscle collapse or muscle separation. They stated that it was an extremely rare occurrence and would require minor surgery followed by immobilization of the arm.

The employee was reluctant to undergo an operation, but finally on March 10 he entered the hospital and the operation was performed. The doctor estimated that the employee would lose about 30 days from work. The company believed that this should not be considered as a disabling injury, but rather a disability arising solely out of physical deficiency. The employee was performing his normal job and they could see no way in which they could have been aware of his condition or prevented such an occurrence.

Decision: This injury should be included in the work injury rates on the basis that it was connected with the employee's work.

Case 414. (1.6)

This was a food poisoning case which occurred at a construction site. The work on this installation was performed by a contractor. Meals prepared at the contractor-operated mess hall were paid for by the employees. Because of the isolation, there were not too many other places available to eat.

One morning 45 employees reported to the contractor's dispensary suffering with what the doctor diagnosed as food poisoning which was traced to corned beef hash served at breakfast that morning.

Out of a total of 45 men, 2 returned to work immediately, 1 remained at the dispensary for half a day, 29 were confined for the whole day, and 13 were confined for two days.

Decision: These food poisoning cases should not be included in the work injury rates. The committee called particular attention to the fact that these employees had paid for their meal as they would have done in any other restaurant, and the committee did not believe that eating the meal arose out of and in the course of their employment.

Case 415. (5.2)

This case concerned an interpretation of the words "sudden effort" as set forth in 5.2 (a). The question was whether the effort involved must be an effort applied to something other than the employee's own body. Following is the report of the injury:

Employee claimed it was about a quarter to five and he was behind one of the tabulating machines, squatting down. He was running two machines at the same time, and they had been giving trouble during the day with the paper feed. Machines use a continual manifold-type paper and the paper was fouling up. He turned to look at the other machine and saw it was not feeding properly. He attempted to jump up quickly to turn around and take care of the other machine, but just as he turned quickly and tried to straighten up he sprained his back and fell right over. He could not get up due to the pain but had to crawl over the floor to stop the motor.

Although he did not report this severe injury until the following day, there were two witnesses to the incident.

Decision: This injury should be included in the work injury rates. The committee decided that the facts submitted in this case met the requirements of 5.2 of the standard.

Case 416.

Borderline case. The committee agreed this should not be used as a precedent for future rulings.

Case 417. (1.6)

A supervisor of System Sales, attending a manufacturing meeting in New Orleans, Louisiana, while walking down the street for dinner at approximately 6:30 P.M., tripped on a broken place in the sidewalk and sprained his ankle.

He did some walking on the ankle, but the following morning it was swollen and was painful. He attended a meeting in the morning and returned home by air.

A physician was called and found no bones had been broken, but the ankle was placed in a cast. The employee was able to do his work at home by mail and telephone.

Approximately one week after injury he returned to his desk, his ankle remaining in a cast.

Decision: This injury should not be included in the work injury rates on the basis that it did not arise out of this employee's work. The committee called particular attention to paragraph A1.6(d) in the Appendix.

Case 418. (5.4)

An engineer with 35 years service was crippled from polio years ago. He has difficulty getting around and uses a cane to help him.

On March 15, around 2 P.M., he was walking in the office where he works when his cane slipped out from under him. He fell forward, breaking the fall with his hands, but landed on his knees. He worked the rest of the day. Later his right knee stiffened and was sore. He treated the knee himself by baking it but called his doctor on March 17. The diagnosis was small amount of fluid under right knee cap and possible torn tissues. The doctor advised keeping off his feet. He was out from March 16 through 20.

This man has had water on his right knee before.

The floor is asphalt tile. It was clear of obstructions and dry. The last time it had been waxed was March 3.

Decision: This injury should not be included in the work injury rates. Some of the committee members commented that in this case it was the employee's cane that slipped rather than the employee, and they believed that an employee who was not crippled would not have slipped under similar circumstances.

Case 419. (1.6)

At 11:50 A.M. an employee was standing alongside a trackwell which was 46 inches below floor level. He reached to the floor to pick up a safety chain in order to hook it on a post. In doing so he apparently blacked out and fell head first into the trackwell. This injury resulted in five days lost from work. The floor was clean. There was no visible unsafe condition at the site of the accident. The doctor did not discover any physical ailment that would cause the man to black out. Employee's pre-employment physical examination did not indicate any physical handicaps.

Decision: This injury should be included in the work injury rates on the basis that it arose out of and in the course of employment.

Case 420. (5.5)

An employee on the night shift, as part of his job, had to travel between two buildings located across the street from each other. There is a tunnel under the street for employees to use or they can walk outside over the street. At the time of this situation, outside lighting was poor and the street was apparently deserted.

The employee elected to cross the street to go to the other building. When he approached the building, he was assaulted by two men who appeared out of the darkness. There had been repeated reports of thefts from cars parked on the street and perhaps these men were in the process of a robbery when the employee approached. At any rate, he was injured. He was slashed on the face and stabbed in the ribs. Fortunately, he was able to return to work after being absent a week. The men who assaulted this man were not company employees.

Decision: This injury should be included in the work injury rates on the basis that it arose out of and in the course of employment.

ISO President Foresees "Incalculable Benefits"

Sir Roger Duncalfe
President, ISO

WITH the beginning of the New Year, a new administration took office in the International Organization for Standardization. Both the retiring president, Dr Hilding Törnebohm of Sweden, and the new president, Sir Roger Duncalfe of the United Kingdom, have issued statements expressing their views on this occasion.

From Dr Törnebohm's statement: " . . . I am filled with gratitude towards the entire Organization and my predecessors, who have given such splendid service in bringing this Organization into being and furthering its development. As yet we have not been able to achieve an ISO Standard, but considerable progress has been made and we can survey the results (17 ISO Recommendations in the last five years) with a fair degree of satisfaction. Our Technical Committees especially have been very active. We therefore deeply appreciate the burden of the Technical Secretariats assumed by our Member Bodies. In that connection our Member Bodies are carrying out work which requires both sacrifice and expense. That work is, of course, ISO's *raison d'être*. In that respect the Member Body of United Kingdom is worthy of special mention. Not less than 20 percent of all the ISO Technical Committees have been assumed by this Organization. . . .

". . . My best wishes for success go to Sir Roger, with the hope that the Organization will forge ahead these next three years under his able leadership. May ISO continue its work for the benefit of all mankind, so that when ISO shortly celebrates its Tenth Anniversary, all who have worked and are devoting their efforts to the Organization, will be able to look back on its activities with a feeling of real contentment."

From the statement by Sir Roger Duncalfe: " . . . I am fortunate, and indeed proud, to follow in my new office men of such distinguished gifts as Howard Coonley, Albert Caquot and Hilding Törnebohm, who, by their dedicated faith and enthusiasm, have fostered and developed that spirit of ISO which has impressed me so profoundly.

"Over the past three years my immediate predecessor, Dr Törnebohm, has rendered outstanding services with a dignity, energy, and amiability which have won general acclaim. Those years have seen marked growth in the scope and influence of ISO. There has been an increase in member nations, and—perhaps of even greater significance—more and more Technical Committees have been set up to seek agreement on subjects of much importance to international trade. The continuously broadening flow of ISO Recommendations may be expected to have valuable long term effects.

"I realize acutely the responsibility of my task at this time when ISO moves into its second decade. I believe an even closer liaison between our various Technical Committees by way of exchange of information of mutual interest as the work proceeds would be to the benefit of the Committees themselves and to ISO as a whole.

"In dedicating myself to the service of ISO's broad aims, I am . . . entirely convinced that these can bring almost incalculable benefits to mankind."

Record of work in ISO—

Last year, the United States gained observer status in all the standards projects of the International Organization for Standardization for the first time. Last year, too, USA sent more delegates—90 persons—to meetings than at any time in the past. However, the USA is thirteenth in line as far as participating in the work of ISO is concerned. France leads the world in international activity, with the United Kingdom showing an impressive record in secretariat responsibility. Russia shows a 20 percent margin over the United States in participation in ISO committees.

(For news of a number of ISO committees in which the USA is participating, see pages 42; 43; and 61.)

At present, American Standards are in use in 46 countries where complete sets are available for reference to engineers, industrialists, and others. Specifically, they are available in the capital cities of South American countries; in the countries of Europe; South Africa; Japan; and the Near East.

FROM OTHER COUNTRIES

Members of the American Standards Association may borrow from the ASA Library copies of any of the following standards recently received from other countries. Orders may also be sent to the country of origin through the ASA office. Titles are given here in English, but documents are in the language of the country from which they were received. An asterisk * indicates that the standard is available in English as well. For the convenience of readers, the standards are listed under their general UDC classifications. In ordering please refer to the number following the title.

621.8 MACHINE PARTS. HOISTING AND CONVEYING MACHINERY. POWER TRANSMISSION. MEANS OF ATTACHMENT. LUBRICATION

Germany (DNA)

3 stds for different forms of nuts for assembling plastic parts — DIN 16903, Bl. 1, 2, 3
Stop rings with set screws — DIN 705

The Netherlands (HCNN)

Electric passenger and freight elevators on ships, safety rules for — N 1084
Unified screw thread, coarse — N 1244
Unified screw thread, fine — N 1318
ISO-screw thread, diameters 0.25 up to 5 mm including — V 1650

Rumania (CSS)

Knuckle screw thread 8-200 mm — STAS 668-49
Both ends threaded studs for cast iron — STAS 4551-54
Both ends threaded studs for aluminum alloy — STAS 4552-54
Metric fine screw thread for diameters 9 - 150 mm, tolerances — STAS 4556-54
Standard spans of travelling bridge cranes — STAS 4661-54
Nominal working conditions of travelling bridge cranes — STAS 4662-54
Structural details of metal travelling bridge cranes — STAS 4664-54

Spain (IRATRA)

Rivets of light alloy metals — UNE 17007

Sweden (SIS)

Black washers. Type SR B — SMS 71 (2nd Ed.)
Headless slotted set screws — SMS 1423 (2nd Ed.)
2 stds for shaft and engine-room for bed-lifts — SIS 506010/11

United Kingdom (BSI)

Pallets for materials handling — 2629: 1955
Refrigerator oils — 2626: 1955

621.9 MACHINE TOOLS. TOOLS

Czechoslovakia (CSN)

4 stds for planing and milling machines: accuracy requirements — CSN 200301, -03, -29/30
Mechanical presses — safety rules — CSN 200775
17 stds for different types of axes — Series CSN 2251 . . .

Germany (DNA)

Standard diameters for straight and 1:30 taper drilling for machine tools — DIN 138
Slot milling cutters — DIN 850
Rotary crushing machines from 1 to 3.6 m diameter — DIN 24111

Rumania (CSS)

Files, flat, tapered — STAS 633-49
Circular saws for wood — STAS 1071-54
Countersinks 60° and 120° — STAS 1367-50
List of stds covering cutting, drilling and milling tools — STAS 4444-54
Abrasive material with ceramic binders — STAS 4593-54
Double monkey-wrench — STAS 4636-54
Universal pipe wrench — STAS 4637-54

Spain (IRATRA)

Two types of carpenter hammers — UNE 41053, 41055

Sweden (SIS)

End mill mandrills — SMS 901 (2nd ed.)

622 MINING

Germany (DNA)

Achor bolt and plate used in mines — DIN 21521
Mining hooks for hanging miners' lamps — DIN 22428
Profile of the wheel rim of mining trucks — DIN 22602
Two- and three-part metal arch supports for mines — DIN 21531, Bl.3
Coupling for 25-ton freight cars on 900 mm track — DIN 22611, Bl.1/3

Rumania (CSS)

Wrenches for mining drill pipes — STAS 214-54
Special couplings of drill pipes — STAS 325-54
Types of sheaves for oil drilling derrick winch — STAS 410-54
Reinforced rubber hose for pneumatic drills — STAS 1062-54
Oil drilling derricks, rules for designing of — STAS 1909-54
Apparatus for fishing out oil well drill pipes — STAS 4595-54

Spain (IRATRA)

Steel wire ropes used in mines — UNE 22001/4
Determination of the output of coal mines — UNE 22090

624 CIVIL ENGINEERING

Czechoslovakia (CSN)

Pillar's foundation pf pre-stressed concrete — CSN 724889

Germany (DNA)

Standard sizes of window openings in dwellings — DIN 18050
Standard sizes of door openings in dwellings — DIN 18100
Rules for calculation of road bridges — DIN 1078, Bl. 1 and 2

Ireland (IIRS)

Steel casement windows and doors — I.S. 60:1955

Rumania (CSS)

Rules for designing bridge double beam supports — STAS 4402-54

625.1/6 RAILWAYS AND TRAMWAYS

Italy (UNI)

13 standards for railroad track material (rails, fishplates, bolts, nuts, lag screws, etc) — UNI 3550—3562

Germany (DNA)

Corrugated sheet metal for railroad car building — DIN 25512
List of diameter of different drilled holes in railroad car construction — DIN 25010
Ventilation louvres in railroad cars — DIN 36061

Rumania (CSS)

Wheel rims for normal gage railroad car — STAS 112-54

Spain (IRATRA)

Railroad car bumpers — UNE 25041
Brake shoe — UNE 25067
Brake triangle — UNE 25068
Axle spring and method of suspension — UNE 25080/3
4 stds for details of airbrake hose connections — UNE 25084/6, 25092

628 SANITARY TECHNOLOGY AND ENGINEERING. SEWERAGE. HEATING. ILLUMINATION

Israel (SII)

W.C. Pans — SI 146

The Netherlands (HCNN)

Air heating and air cooling apparatus, Definition and Symbols — V 1037

Uruguay (UNIT)

Asbestos-cement sewer pipes — UNIT 112-55

629.113 MOTOR VEHICLES

Czechoslovakia (CSN)

5 stds for testing and acceptance pneumatic pressure tanks, details — CSN 303507,-3571/2,-3580/1
Skoda type motor truck — CSN 300905
11 stds for different types of clutch lining — CSN 303102,-3126,-3126/31, -3402/3,-3430

Israel (SII)

Automobile spare parts: king pin — SI 138
Automobile spare parts: piston pin — SI 144

629.13 AERONAUTICS. AIRCRAFT ENGINEERING

The Netherlands (HCNN)

Sizes of aircraft instrument cases, mounting and fitting holes — V 1820
Protective rubber appliances — V 1875

Spain (IRATRA)

General terminology — UNE 28002 h 2
Tensile test of wood used in aviation — UNE 28012 h 9
Extra light wood used in airplane construction characteristics — UNE 28014/5

637.0 DAIRYING. MILK PRODUCTS IN GENERAL

United Kingdom (BSI)

Gerber method for the determination of fat in milk and milk products—Part 2, Methods — 696: Part 2:1955

Gerber method for the determination of fat in milk and milk products—Part 1: Apparatus 696: Part 1:1955

643.3 KITCHEN EQUIPMENT

Belgium (IBN)

Domestic gas cookers; general rules NBN 344

Sweden (SIS)

2 stds for kitchen cupboards SIS 600024, 600027

661 CHEMICAL PRODUCTS IN THE NARROWER SENSE

Argentina (IRAM)

Acetic acid, industrial IRAM 1105
Carbon disulfide, industrial IRAM 1127

India (ISI)

Specification for Phenol (Carbolic Acid) IS 538-1955
Specification for naphthalene IS 539-1955
Glacial acetic acid, pure, pharmaceutical and technical IS 695-1955

662.9 HEATING APPARATUS AND METHODS

Czechoslovakia (CSN)

Metal space heaters for solid fuel CSN 068655

Rumania (CSS)

Industrial type burner for methane gas STAS 4396-54
2 stds for domestic gas burner cocks STAS 4516/7-54
Gas stop valve for domestic installation STAS 4581-54

665 OILS. FATS. WAXES

Argentina (IRAM)

Animal fats. Determination of moisture and volatile matters content IRAM 5553
Method of test for tetraethyllead in gasoline IRAM 6521
Method of test for freezing point of aviation gasoline IRAM 6522
Method of test for oxidation stability of aviation gasoline IRAM 6523
Method of test for gum content in gasoline (copper dish method) IRAM 6528
Method of test for existent gum in gasoline (air jet evaporation method) IRAM 6530

Belgium (IBN)

Linseed oil NBN 371

The Netherlands (HCNN)

Lubricating greases. Cone penetration test N 3023
Soja bean oil, raw and refined V 1213

Sweden (SIS)

Tung oil. Methods of test SIS 160020

665.45 ASPHALT INDUSTRY

Spain (IRATRA)

Distillation of tar used in road building UNE 7085
Two standards for testing bituminous materials UNE 7092/3

Uruguay (UNIT)

Determination of inorganic substances content in bituminous material UNIT 105-55
Asphalt cement UNIT 106-55
Sampling bituminous materials UNIT 107-55
Determination of loss of weight of petroleum and bituminous products by heating UNIT 108-55

667.6/8 PAINTS. LACQUERS. VARNISHES

India (ISI)

Decalin (decahydronaphthalene) for paints IS 645-1955
Varnish medium for aluminum paint IS 642-1955
Ready mixed paint, brushing, finishing, interior, oil gloss, for general purposes, white IS 641-1955

Japan (JISC)

Prussian blue pigment JIS K 5113-1950*
Zinc chrome pigment JIS K 5114-1952*
Brilliant carmine 6B pigment JIS K 5206-1950*

The Netherlands (HCNN)

3 stds for solvents for paints N 604/6

Sweden (SIS)

4 specifications for different pigments SIS 160408/10, 160021

668.4 GUMS AND RESINS

Belgium (IBN)

Turpentine NBN 373

Portugal (IGPAI)

6 provisory standards for different tests of rosin P-98—P-103

669 METALLURGY

Argentina (IRAM)

Carbon steel castings for valves, flanges and fittings IRAM 632
Molybdenum alloy steel casting for valves, flanges and fittings IRAM 635
Carbon steel forgings for valves, flanges and fittings IRAM 636
Chromium-molybdenum alloy steel casting for valves, flanges and fittings IRAM 638
Forged alloy steel valves, flanges and fittings for high temperatures IRAM 639

Germany (DNA)

I-shape, rolled for steel drum hoops DIN 6634
Hot-rolled aluminum plates 5-40 mm thick DIN 59600
Pressed shapes of aluminum and aluminum alloys DIN 9711

India (ISI)

Chemical analysis of copper IS 440-1955
Chemical analysis of brasses and bronzes IS 441-1955
Specification for gold leaf IS 639-1955

Israel (SII)

Silicon copper SI 142
Phosphor Copper SI 141
Copper alloys ingots SI 137

Italy (UNI)

24 stds for aluminum alloys of different chemical composition UNI 3565—3584 and UNI 3599—3602
Microscopic examination of tungsten and its alloys UNI 3594
Copper wires and rods, for general use UNI 3605/6
Copper bands for general use UNI 3607
Special heat resisting steels UNI 3608
General rules for delivery and acceptance of unfinished bolts and anchor plates UNI 3609/10

Poland

Carbon steel rods for mining drills PN H-93241
2 stds for blast furnace slag PN B-23001,-04
9 stds for chemical analysis of metals PN H-04025,-216,-217,-218,-04816, -819,-821,-824,-826,-831
Aluminum alloys for castings: classification PN H-88027
Soft lead sheet PN H-92916
Structural steel forgings PN H-94005

Rumania (CSS)

Cupola furnaces STAS 2839-54
Comparative tables of Rumanian, USSR and German standards for structural steels STAS 4400-54
Color code for marking different grades of cast iron and steel STAS 4577-54

Spain (IRATRA)

Bulb angle shapes for shipbuilding UNE 36534
Triangular bars for file manufacturing UNE 36617
Light alloy for molding, group Al-Cu UNE 38216
Light alloy for molding, group Al-Mg UNE 38231/2
Seven stds for light alloy of group Al-Si, different composition UNE 38251/3, 38255/8

677 TEXTILE INDUSTRY

Japan (JISC)

Method of testing hard and bast fiber yarn JIS L 1011-1953*

Spain (IRATRA)

3 stds for loom reed UNE 40005/6, 40010

69 BUILDING INDUSTRY AND TRADES

Czechoslovakia (CSN)

Hydraulic Concretes CSN 803003

Israel (SII)

Specification for bricklayer's work SI 140
Standard form of contract for building works, based on bill of quantities SI 133

The Netherlands (HCNN)

Gypsum N 492
Building terminology. Civilian and utilitarian buildings. Part I. Calculation of expenses V 1067
Combustibility, flammability, surface spread of flames and fire resistance of building materials V 1076

Rumania (CSS)

Natural aggregates for concrete STAS 1667-54
Clay bricks STAS 4608-54

Spain (IRATRA)

2 stds for testing roofing slates UNE 7090/1

Sweden (SIS)

3 stds for insulating boards in constructions SIS 531610/11, 532210

United Kingdom (BSI)

Sandlime (calcium silicate) bricks 187:1955
Method of test and rating for steam-heated air-heater batteries 2619:1955

744 TECHNICAL DRAWING

Germany (DNA)

Method of dimensioning DIN 406
Method of representing screws, bolts and nuts DIN 27

Israel (SII)

2 stds for lettering, folding and filing of technical drawings SI 134/5

Portugal (IGPAI)

Sizes of drawings and scales used NP-48

Book Reviews

Instruments for Measurement and Control. *Werner G. Holzbock.* 1955. 371 *pp. Reinhold Publishing Corporation, 430 Park Avenue, New York 22, N. Y.* $10.00.

Mr Holzbock is Development Engineer of the Askania Regulator Company, Chicago, Illinois. His book deals with industrial instruments used for remote reading or remote automatic action within the industrial plant. It is intended as a reference for those who want an instrument to fill a specific need, and as a help to the man who is developing new instruments. The chapters deal with temperature; humidity and moisture; pressure; flow; liquid level; density; viscosity; speed; analysis; automatic controller action; electric controllers; self-operated, pneumatic, and hydraulic controllers; time function controllers; final control elements; and trends. The book includes a glossary and an index.

The Automatic Factory*—a critical examination. Stephen A. June, et al.* 1955. 88 *pp. Instruments Publishing Company, Inc, 845 Ridge Avenue, Pittsburgh 12, Pa.* $1.50.

Prepared by a student-team as part of the requirements of the manufacturing course of Georges F. Doriot at Harvard Graduate School of Business Administration, this book is the result of personal interviews with manufacturers and motor company officials. Among subjects discussed are mechanization vs the automatic factory; contemporary automaticity (in automobile and four other plants); costs; social implications; and cost determination of "Project Tinker-toy." One of the authors is now assistant manager of a paint company retail outlet; one has formed his own company in Oslo, Norway; and another is vice-president of a firm of general contractors.

Automation, The Advent of the Automatic Factory. *John Diebold.* 1955. 6 *x* 9 *in.* 181 *pp. D. Van Nostrand Company, Inc, 250 Fourth Avenue, New York, N. Y.* $3.00.

An analysis of the history of automatic production and of the problems of readjustment and rethinking that may be expected as a result of the new techniques. The author takes credit for coining the word "automation" in his Harvard report, *Making the Automatic Factory a Reality.*

Dictionary of Legal Terms. *Spanish-English and English-Spanish. Louis A. Robb.* 1955. 228 *pp. John Wiley & Sons, Inc, 440 Fourth Avenue, New York 16, N. Y.* $8.00.

With four lawyers as consultants, Mr Robb has compiled this dictionary of equivalent Spanish and English terms used in the legal field. Definitions are given only where there is no equivalent or for an unfamiliar term.

Rules for Field Welding of Steel Storage Tanks. 1955. *American Welding Society, 33 W. 39th Street, New York 18, N. Y.* $1.00.

The use of premium steels and provisions for testing by radiography have been included in this revised edition for the first time. Also included are four double-size pages of radiograpic porosity standards.

Directory of Wheel and Track-Type Tractors Produced Throughout the World. 1955. 372 *pp. Food and Agriculture Organization of the United Nations, Rome, Italy.* $3.00.

Issued in English, French, and Spanish, the information in this Directory was obtained from the manufacturers themselves or from official publications. Specifications are given both in the metric and English systems. The Directory lists addresses of manufacturers of wheel and crawler tractors; and lists both wheel tractors and crawler tractors by categories and specifications of models.

ABC Conference on Unification of Engineering Standards. 1955. 87 *pp. Heavy paper cover. The American Society of Mechanical Engineers, 29 West 39th Street, New York 18, N. Y. (Available from the American Standards Association, 70 E. 45th Street, New York 17, N. Y.)* $1.50.

This official report of the 1955 conference on unification of engineering standards between representatives of Canada, the United Kingdom, and the USA, was prepared by the American Standards Association and published by ASME. The conference was called by ASA at the request of the Office of Defense Mobilization, and arrangements for

it were carried out by ASME. This report includes a bibliography of the technical papers presented at the conference as well as reports of the discussions and recommendations. It also includes a list of the correspondents who are responsible for continuing interchange of information on the subjects under discussion.

•

Screw Thread. *English edition. Hoofdcommissie voor de Normalisatie in Nederland, The Hague, Netherlands. June* 1954. *(Available from the American Standards Association.)* $2.25.

Intended to help industry solve difficulties arising as a result of the large number of different screw threads still being used throughout the world, this book was published by the standards association of The Netherlands first in Dutch and now in English. It has been compiled to give as much information as possible concerning all the currently used screw threads. At present there are at least 63 different types in use, the Netherlands association reports.

The book contains chapters discussing basic principles and nomenclature; dimensions and tolerances; and development of screw threads; as well as a synopsis of existing standards (arranged in accordance with the form and purpose of the threads they deal with and also the countries which issued them). It also contains a chapter on the designation of screw threads in different countries; a synopsis of existing standards; and a survey of the pitches for every standardized diameter.

Tables compare the principal data, such as form, pitch, and diameter, for existing screw threads. In addition, an appendix gives a table of calculations for strength and fastening of screws and bolts.

•

Rules for Electric Traction Motors. *IEC Publication* 48. *Third edition.* 1955. *International Electrotechnical Commission, Geneva, Switzerland. (Available through the American Standards Association, 70 E. 45th Street, New York* 17, *N. Y.)* $2.00.

These international rules apply to traction motors for railways, tramways, trolley buses, and electro-buses. Not included are motors for mining locomotives, motors with a one-hour rating of less than 15 kw, and for the time being direct-current compound motors.

The rules cover international ratings, limits of temperature-rise; temperature measurements; dielectric tests; commutation tests; starting tests; overspeed tests; characteristics; and supply voltages of traction systems.

This is a revision of rules originally drawn up by the International Mixed Committee on Electric Traction Equipment of the International Electrotechnical Commission in 1933. The present edition, completed by the committee at the IEC meetings in Philadelphia in September 1954, has now been approved by the national committees of IEC in the various member countries, and by the International Union of Railways. The following IEC national committees approved the new edition: Belgium; Denmark; France; German Federal Republic; Japan; Netherlands; Sweden; Union of South Africa; United Kingdom; United States; Yugoslavia.

•

Safety in Coal Mines. *Volume II, Legislation.* 1955. *International Labor Office (Geneva, Switzerland),* 917 *15th Street N.W., Washington* 5, *D. C.* 647 *pp. Heavy paper cover.* $3.50.

An analysis of the most important safety provisions of the mining laws and regulations of eight countries is presented, covering Belgium, Canada, France, the Federal Republic of Germany, the Netherlands, the Union of South Africa, the United Kingdom, and the United States. Explaining that in Canada safety in coal mines is a matter for the provinces and in the United States also partly a matter for the states, the book also includes Alberta as a typical Canadian province, and Illinois, New Mexico, and Pennsylvania as representing state legislation.

This volume complements the first volume which provided statistical material showing the incidence and chief causes of underground accidents in coal mines. It also includes a description of administration and inspection and general safety activities in nine coal-producing countries and at the international level.

•

Acoustics. *Leo L. Beranek.* 1954. *McGraw-Hill Electrical and Electronic Engineering Series. McGraw-Hill Book Company, Inc,* 330 *West* 42*nd Street, New York* 26, *N. Y.* $9.00.

This leading textbook on accoustics was written by one of the outstanding authorities in the field. Dr Beranek is now chairman of ASA's Acoustical Standards Board (page 47.)

The book includes chapters on noise control, acoustic measurements, and hearing and psychoacoustic criteria as well as such subjects as radiation of sound, acoustic components, microphones, and loudspeakers. It references many of the American Standards developed by Sectional Committee Z24 on Acoustics, Vibration, and Mechanical Shock, of which Dr Beranek was chairman for a number of years.

Numerous illustrations and charts make the book a must and an everyday manual for the serious, practical worker in the acoustics field.

•

The Welding of Austenitic Chromium-Nickel Steel Piping and Tubing. 1955. *D*10. 4-55*T*. 27 *pp. American Welding Society,* 33 *West* 39*th Street, New York* 18, *N. Y.* $1.00.

This is a committee report intended to serve as a guide to prevent difficulties in welding austenitic stainless steel.

Sections discuss major welding considerations, the suitability of various stainless steel grades for welding pipe, suitable welding processes, the proper selection of filler metal, the role of the welded joint, proper pipe welding techniques, and inspection methods.

Tables list the standard AISI, ACI, and ASTM types of austenitic stainless steel and the correlation between these types. In addition, a table gives the specific welding rod or electrode to be used for welding each type of stainless steel.

AMERICAN STANDARDS UNDER WAY

Status as of January 30, 1956

ACOUSTICS

American Standard Approved—

Specifications for Ultrasonic Therapeutic Equipment, Z24.18-1956
Sponsor: Acoustical Society of America

AGRICULTURE

In Standards Board—

Procedure for the Acceptance of a Standard Common Name for a Pest Control Chemical, K62.1
Sponsor: U.S. Department of Agriculture

AUTOMOTIVE

American Standards Published—

Test for Boiling Point of Engine Antifreezes, Method of, ASTM D1120-53; ASA D14.1-1955 $.30

Test for Reserve Alkalinity of Concentrated Engine Antifreezes, Method of, ASTM D1121-54; ASA D14.2-1955 $.30

Test for Specific Gravity of Concentrated Engine Antifreezes by the Hydrometer, Method of, ASTM D1122-53; ASA D14.3-1955 $.30

Standard Method for Sampling and Preparing Aqueous Solutions of Engine Antifreeze for Testing Purposes, Method of, ASTM D1176-54; ASA D14.4-1955 $.30

Freezing Point of Aqueous Engine Antifreeze Solution, ASTM D1177-54; ASA D15.5-1955 $.30

Test for Water Vapor Content of Gaseous Fuels by Measurement of Dew-Point Temperature, Method of, ASTM D1142-53; ASA Z77.3-1955 $.30

Sampling Natural Gas, Method of, ASTM D1145-53; ASA Z77.4-1955 $.30
Sponsor: American Society for Testing Materials

BUILDING AND CONSTRUCTION

American Standard Published—

Cast-Brass Solder-Joint Drainage Fittings, B16.23-1955 (Revision of B16.23-1953) $1.25
Sponsors: American Society of Mechanical Engineers; Manufacturers Standardization Society of the Valve and Fittings Industry; Heating, Piping, and Air Conditioning Contractors National Association

American Standards Approved—

Gypsum Lath, Specifications for, ASTM C37-54; ASA A67.1-1956 (Revision of ASTM C37-50; ASA A67.1-1951)

Gypsum Sheathing Board, Specifications for, ASTM C79-54; ASA A68.1-1956 (Revision of ASTM C79-52; ASA A68.1-1953)

Testing Gypsum and Gypsum Products, Methods of, ASTM C26-54; ASA A70.1-1956 (Revision of ASTM C26-52; ASA A70.1-1953)

Legend

Standards Council—Approval of Standards Council is final approval as American Standard; usually requires 4 weeks.

Board of Review—Acts for Standards Council and gives final approval as American Standard; action usually requires 2 weeks.

Standard Boards—Approve standards to send to Standards Council or Board of Review for final action; approval by standards boards usually takes 4 weeks.

Gypsum Partition Tile or Block, Specifications for, ASTM C52-54; ASA A105.1-1956 (Revision of ASTM C52-41; ASA A105.1-1954)
Sponsor: American Society for Testing Materials

Methods of Determining Areas in Office Buildings (Other than Government Buildings), Z65.1-1956
Sponsors: Office of Education, U. S. Department of Health, Education, and Welfare; National Association of Building Owners and Managers

CONSUMER GOODS

New Project Initiated—

Performance Requirements for Cleaning Supplies
Sponsor: American Hotel Association

ELECTRICAL AND ELECTRONICS

American Standard Published—

Conditioning Plastics and Electrical Insulating Material for Testing, ASTM D618-54; ASA C59.28-1955 $.30
Sponsor: American Society for Testing Materials

In Standards Board—

Specifications for Aluminum Bars for Electrical Purposes (Bus Bars), ASTM B236-55T; ASA C7.27 (Revision of ASTM B236-52T; ASA C7.27-1953)

Specifications for Zinc-Coated (Galvanized) High Tensile Steel Telephone and Telegraph Line Wire, ASTM A326-52; ASA C7.30 (This standard covers steel line wire formerly covered by a portion of G8.3-1944)

Specifications for Zinc-Coated (Galvanized), Iron or Steel Telephone and Telegraph Line Wire, Revision of ASTM A111-43; ASA G8.3-1944

Specifications for Zinc-Coated Steel Wire Strand "Galvanized" and Class A ("Extra Galvanized"), Revision of ASTM A122-41; ASA G8.6-1943

Specifications for Zinc-Coated Steel Wire Strand (Class B and Class C Coatings), Revision of ASTM A218-41; ASA G8.11-1944
Sponsor: American Society for Testing Materials

Measurement of Aspect Ratio and Geometric Distortion of Television Cameras and Picture Monitors, C16.23

Terms for Audio Techniques, Definitions of, ASA C16.24; 54 IRE 51

Television Signal Measurement Terms, Definitions of, C16.27; 55 IRE 23.S1
Sponsor: Institute of Radio Engineers

Insulators for Electric Power Lines, C29
Sponsor: Electrical Standards Board

Definitions of Terms of Electron Tubes, C60.9

Definitions of Terms of Magnetrons, C60.10

Definitions of Semiconductor Terms, ASA C60.14; 54 IRE 7.S2
Sponsor: Joint Electron Tube Engineering Council

Incandescent Lamps General Service for 230- and 250-Volt Circuits, Revision of C78.101-1949

Specifications for Fluorescent Lamp Starters, Revision of C78.180

Method of Testing Fluorescent Lamp Starters, Revision of C78.181

Code for the Designation of Photo Lamps, C78.370

Dimensional and Electrical Characteristics of 90-Watt T-17 Preheat Start Fluorescent Lamps, Revision of C78.411-1955
Sponsor: Electrical Standards Board

Withdrawal Being Considered—

Machine Tool Electrical Standards, C74-1942
Sponsor: National Machine Tool Builders' Association

Characteristics of 100-Watt T-17 Preheat Start Fluorescent Lamp, C78.410-1955
Sponsor: Electrical Standards Board

GAS-BURNING APPLIANCES

American Standards Published—

Approval Requirements for Gas-Fired Incinerators, Z21.6-1955 (Revision of Z21.6-1949 R1952 and Addenda Z21.6a-1953 and Z21.6b-1954) $1.50

Z21.10b-1955 Addenda to American Standard Approval Requirements for Gas Water Heaters, Z21.10-1953 and Addenda Z21.10a-1954 $.40

Z21.11a-1955 Addenda to American Standard Approval Requirements for Gas-Fired Room Heaters, Z21.11-1954 $.40

Z21.13.1b-1955 Addenda to American Standard Approval Requirements for Central Heating Gas Appliances, Volume I, Steam and Hot Water Boilers, Z21.13.1-1951 and Addenda Z21.13.1a-1954 $.25

Z21.13.3b-1955 Addenda to American Standard Approval Requirements for Central Heating Gas Appliances, Volume III, Gravity and Fan Type Floor Furnaces, Z21.13.3-1951 and Addenda Z21.13.3a-1954 $.25

Approval Requirements for Hotel and Restaurant Deep Fat Fryers, Z21.27-1955 (Revision of Z21.27-1940 and Addenda Z21.27a-1946) $1.50

Listing Requirements for Metal Connectors for Gas Appliances, Z21.24-1955 [consolidation and revision of Listing Requirements for Semi-Rigid Gas Appliance Tubing and Fittings, Z21.24-1941 (R1953) and Listing Requirements for Gas Appliance Connectors of Flexible Metal Tubing and Fittings, Z21.32-1942 (R1953)] $1.00

Z21.38a-1955 Addenda to American Standard Requirements for Installation of Gas Conversion Burners in Domestic Gas Ranges, Z21.38-1953 $.10

Z21.39a-1955 Addenda to American Standard Listing Requirements for Gas Conversion Burners for Domestic Ranges, Z21.39-1953 $.50
Sponsor: American Gas Association

HIGHWAY TRAFFIC

In Board of Review—

Railroad Highway Grade Crossing Protection, Revision of D8.1-1951
Sponsor: Association of American Railroads

MATERIALS AND TESTING

In Standards Board—

Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles, Methods of Test for, ASTM A 90-53; ASA G8.12

Safeguarding Against Embrittlement of Hot Galvanized Structural Steel Products and Procedure for Detecting Embrittlement, Recommended Practice for, ASTM A 143-46; ASA G8.13

Zinc Coating (Hot-Dip) on Iron and Steel Hardware, ASTM A 153-53; ASA G8.14
Sponsor: American Society for Testing Materials

Reaffirmation Being Considered—

Zinc-Coated (Galvanized) Iron or Steel Tie Wires, Specifications for, ASTM A 112-33; ASA G8.4-1935

Zinc-Coated (Galvanized) Iron or Steel Farm-Field and Railroad Right-of-Way Wire Fencing, Specifications for, ASTM A 116-48; ASA G8.9-1948

Zinc-Coated Iron or Steel Chain-Link Fence Fabric Galvanized After Weaving, Specifications for, ASTM A 117-33; ASA G8.5-1935

MECHANICAL

American Standard Published—

Preferred Limits and Fits for Cylindrical Parts, B4.1-1955, (Revision of B4.1-1947, Part 1)
Sponsor: American Society of Mechanical Engineers

In Standards Board—

Slotted and Recessed Head Wood Screws, B18.6.1, (Revision of B18.6-1947)
Sponsors: Society of Automotive Engineers; The American Society of Mechanical Engineers

OPTICS

New Project Requested—

Ophthalmic Lenses
Requested by: The Indiana Interprofessional Committee on Eye Care

PETROLEUM PRODUCTS AND LUBRICANTS

Standard Submitted—

Selected Values of Physical and Thermodynamic Properties of Hydrocarbons and Related Compounds
Submitted by: American Petroleum Institute

PHOTOGRAPHY

American Standards Approved—

Dimensions for Medical X-ray Sheet Film (Inch and Centimeter Sizes), PH1.17-1956 (Revision of PH1.17-1953)

Dimensions for Professional Portrait and Commercial Sheet Film (Inch and Centimeter Sizes), PH1.18-1956 (Revision of PH1.18-1953 and combination with Z38.1.29-1949)

Dimensions for 70-Millimeter Unperforated and Perforated Film for Cameras Other Than Motion Picture Cameras, PH1.20-1956 (Revision of Z38.1.3-1948)

Dimensions for Amateur Roll Film, Spool, and Backing Paper No. 828, PH1.21a-1956 (Supplement to Z38.1.7-1950)

Specifications for 35-Millimeter Slidefilm Projection Rolls, PH1.24-1956 (Revision of Z38.3.3-1946)

Specifications for Safety Photographic Film, PH1.25-1956 (Revision of Z38.3.1-1943)

Method for the Sensitometry of Industrial X-ray Films for Energies up to 2 Million Electron Volts, PH2.8-1956

Method for the Sensitometry of Medical X-ray Films, PH2.9-1956

Photographic Thermometers, PH4.7-1956 (Revision of Z38.8.11-1948)

Photographic Graduates, PH4.9-1956 (Revision of Z38.8.12-1948)

X-ray Sheet Film Hangers (Clip-Type), PH4.18-1956 (Revision of Z38.8.23-1949)

Internal Dimensions for Deep Tanks for Manual Processing of Amateur Roll Film, PH4.19-1956 (Revision of Z38.-8.8-1946)

Channel-Type Multiple Photographic Hangers (Plates and Sheet Film), PH4.22-1956)

Specification for Photographic Grade Sodium Citrate, PH4.179-1956
Sponsor: Photographic Standards Board

In Standards Board—

Focal Length of Lenses: Markings, PH3.13 (Revision of Z38.4.4-1942)
Sponsor: Photographic Standards Board

SAFETY

Project Initiated—

Parking Garage Equipment

American Standards Approved—

Prevention of Dust Explosions in Flour and Feed Mills, Code for, Z12.3-1955 (Revision of Z12.3-1953)

Prevention of Dust Explosions in Terminal Grain Elevators, Code for, Z12.4-1956 (Revision of Z12.4-1953)

Prevention of Dust Ignitions in Country Grain Elevators, Code for, Z12.13-1956 (Revision of Z12.13-1953)
Sponsor: National Fire Protection Association

Scheme for Identification of Piping Systems, A13.1-1956 (Revision of A13-1928)
Sponsors: American Society of Mechanical Engineers; National Safety Council

Reaffirmation Requested—

Safety Code for Manlifts, A90.1-1949
Sponsors: American Society of Mechanical Engineers; Association of Casualty and Surety Companies

---

WHY STANDARDIZE?

(*continued from page* 41)

any further work on manual standardization should include representation from users at the working level, as well as from Government and technical publications personnel.

The Standards Committee of the Technical Publishing Society is setting up "task groups" to follow up on problems brought out at the meeting. One group of subcommittees will deal with the revision of existing technical manual specifications to conform to MIL-STD-218 for each of the major military departments. The second will be a "theory" group responsible for creating optimum new standards for technical manuals in the three fields of writing, art, and reproduction. The third will be concerned with the standardization of reports, as separate from manuals.

These three working groups will be guided by a Coordination, Planning, and Liaison Group, according to the proposal. This staff group will be responsible for planning and coordinating the operations of the other three groups as well as for liaison with the Department of Defense, the Aircraft Industries Association, and the American Standards Association. It will also have the responsibility for seeing that the needs of the ultimate "users" of technical literature are adequately met, as emphasized at the symposium.

International Committee Studies Boiler Code

A draft proposal for an international code for stationary boilers is being discussed at a meeting of Technical Committee 11, Unification of Boiler Codes, of the International Organization for Standardization. The meeting is being held in Madrid, Spain, February 7 to 24, 1956. The American Standards Association holds the secretariat for this international committee, with the Boiler Code Committee of The American Society of Mechanical Engineers heading the technical work in the USA.

F. X. Gilg, Executive Assistant, Babcock & Wilcox Company, New York, and chairman of the ASME Boiler and Pressure Vessel Special Committee on TC 11, heads the delegation from the USA. Other members of the USA delegation include: J. Althouse, Chief Metallurgical Engineer, Lukens Steel Company, Coatesville, Pa.; E. O. Bergman, Staff Consultant, C. F. Braun and Company, Alhambra, California; C. Jackman, Supervising Metallurgist, U. S. Steel Corporation, Chicago, Illinois; E. C. Korten, Assistant Chief Engineer, Hartford Steam Boiler Inspection and Insurance Company, Hartford, Conn.; J. L. Menson, Assistant Chief Engineer, Combustion Engineering, Inc., New York (deputy head of delegation); C. W. Wheatley, Staff Executive, A. O. Smith Corporation, Milwaukee, Wisconsin; F. S. G. Williams, Manager of Engineering Standards, Taylor Forge and Pipe Works, Chicago, Illinois; J. D. Wilding, Secretary of the Boiler and Pressure Vessel Committee, ASME.

Delegates from Austria, Belgium, Canada, Czechoslovakia, France, Germany, India, Indonesia, Italy, The Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, United Kingdom, and the USA are taking part in the meeting.

WHAT'S NEW ON AMERICAN STANDARDS PROJECTS

Small Tools and Machine Tool Elements, B5—

Sponsors: The American Society of Mechanical Engineers; National Machine Tool Builders Association; Society of Automotive Engineers; Metal Cutting Tool Institute

The American Society of Tool Engineers has become a sponsor of Committee B5. The Society takes a close interest in the work of the committee. It helps to keep American Standards in this field up to date by assigning proposed standards to the Society chapters that are especially interested for review and comment.

Code for Pressure Piping, B31—

Sponsor: American Society of Mechanical Engineers

The following interpretations of American Standard Code for Pressure Piping, B31.1-1955, have been submitted by the sponsor for publication as interim actions of Sectional Committee B31 pending revision of the Code. They may be used in specifications or otherwise as representing the considered opinion of the committee. They will not constitute part of the Code, however, until formal action has been taken by ASME, as sponsor, and ASA approval of a revised edition.

CASE 22

Inquiry: In American Standard B31.1-1955 Code for Pressure Piping, Section 3, Par. 325 (Table 11), the Type H solder-joint fittings for Instrument and Control piping and their ratings are limited to those conforming to American Standard B16.18. Are wrought solder-joint fittings conforming to American Standard B16.22 acceptable? Is it permissible to apply the fittings to service other than those indicated in Table 11? May the rating vary with the types of solders used?

Reply: It is the opinion of the committee that wrought solder-joint fittings conforming to American Standard B16.22 may be included as Type H fitting in Par. 325 (Table 11) in the Code. The services of Type H solder-joint fittings shall be limited to those specified in Par. 325 (Table 11), and the ratings shall be limited to those published in American Standard B16.18 for cast fittings and American Standard B16.22 for wrought fittings, for the solders specifically named in each standard.

CASE 23

Inquiry: Do the provisions of Par. 831.41(h), Section 8 of American Standard Code for Pressure Piping (ASA B31.1.8-1955) apply to reinforcement sleeves, placed over welds or dresser type couplings?

Reply: Par. 831.41 (h) applies to local reinforcement of welded branch connections, but not to reinforcement sleeves of circumferential pipeline joints. It should be the responsibility of the installer to determine that failure of neither the reinforcing sleeve nor the carrier pipe will occur should fluid become trapped in the annular space between their surfaces.

Insulated Wires and Cables, C8—

Sponsor: Electrical Standards Board

A new subcommittee on potheads for terminals has been set up to handle work recently included in the scope of Committee C8. The

first order of business of the new subcommittee will be to consider the American Institute of Electrical Engineers Standard No. 48 on Potheads. This standard is now being revised by a subcommittee of the AIEE Insulated Conductor Committee.

A revision of the American Standard Specifications for Cotton Braid for Insulated Wire and Cable for General Purposes, C8.12-1942, has been submitted to the sectional committee for letter ballot action.

A proposed standard for weather-resistant wire and cable, polyethylene type, C8.35, and a revision of the American Standard Specifications for Weather-Resistant (Weatherproof) Wire and Cable (URC type), C8.18-1948, are still under consideration. Considerable study of the elongation requirement for the polyethylene material on the wire is under way in connection with the former.

Magnet Wire, C9—

Sponsor: National Electrical Manufacturers Association

In addition to the three standards for magnet wire announced as approved American Standards last month (MAG OF STDS, Jan. 1956, p 28), a number of other draft standards are near completion by the sectional committee.

The work on magnet wire standards was organized into a separate sectional committee in 1950 following recommendations by Sectional Committee C8 on wire and cable. Scope of the committee is "Standards for magnet wire, including definitions, type designations, dimensions, construction, performance and methods of test, of all shapes and sizes of insulated copper conductors generally used in the winding of coils for electrical equipment."

Members of the committee include representatives of the Wire and Cable Section of NEMA; the NEMA Transformer and Motor and Generator Sections as consumers; and the NEMA Renewal Parts Section as distributors; the American Society for Testing Materials; the American Institute of Electrical Engineers; the Electric Tool Institute; International Business Machines Corporation; the National Industrial Service Association; the Radio-Electronics-Television Manufacturers Association; and the Telephone Group. The Armed Services Electro Standards Agency has a liaison representative.

The first standards prepared by this committee were approved in 1953, covering enamel-coated round copper magnet wire; cotton-covered round copper magnet wire; silk-covered round copper magnet wire; and nylon fibre covered round copper magnet wire.

Machine Tool Electrical Standards, C74—

Consideration is being given to withdrawal of the American War Standard, Machine Tool Electrical Standards, C74-1942. The National Machine Tool Builders' Association has explained that the standards are definitely obsolete, having been superseded twice as far as the machine tool industry is concerned. The Association reports that revised electrical standards have been approved by the NMTBA Board of Directors and when published will be submitted to the National Fire Protection Association and to the American Standards Association.

Safety Code for Pulp and Paper Mills, P1—

Sponsor: National Safety Council; American Pulp and Paper Association

A draft standard is to go to final letter ballot of this sectional committee as the result of a meeting held December 15.

Acoustics, Vibration, and Mechanical Shock, Z24—

Sponsor: Acoustical Society of America

Standard loudness computations are to be prepared by a writing group recently organized, L. Batchelder, chairman of Committee Z24, told the sponsor in a report recently. Dr I. Pollack, Human Resources Research Laboratories, Washington, D. C. has been named chairman of the group.

It is expected that transistor hearing aids will be considered in a revision of the American Standard Method for Measurement of Characteristics of Hearing Aids, Z24.14-1953, Mr Batchelder reported. The revision is to be started by a recently appointed writing group with S. F. Lybarger, Radioear Corporation, Pittsburgh, as chairman. Closer conformity with international standards will also be studied. Bone-conduction hearing aids may be included for the first time.

The possibility of developing a standard on the characteristics of vibration isolators is to be studied in a new exploratory project. Another new project will study techniques of measurement of mechanical impedance of structures. This is a problem of vibration engineering as distinct from such small-scale devices as phonograph pickups. Sam Levy, General Electric Corporation, Schenectady, N. Y., is chairman.

A meeting of Committee Z24, especially for consideration of shock and vibration topics, was held under the auspices of the Society for Experimental Stress Analysis, November 14, 1955. This meeting coincided with meetings of the Society and of the American Society of Mechanical Engineers. Approximately 100 men in the shock and vibration field attended. Ten of the eleven Z24 subcommittees in this field were represented. Those present believed that similar meetings for discussion specifically of shock and vibration topics should be held in the future.

Two new projects were started as a result of this meeting. One is an exploratory project which will consider standards on techniques of vibration measurement. R. N. Hamme, Engineering Research, University of Michigan, Ann Arbor, Michigan, is chairman. A second new exploratory project will consider standards for reduction of shock and vibration data.

Sound Level Meters—

A new edition of the American

Standard Specification for Sound Level Meters, Z24.3-1944, is being considered by the sectional committee. Practically a complete new draft has been written reflecting the important changes that have taken place in the past 11 years. The proposed standard includes several new sections, additional definitions, and revisions of some of those in the former edition. A new section on characteristics and tolerances is added in the new draft; a section on indication; a whole new section on extraneous influences; and one on calibration. A new section in Appendix A describes the properties sought in a more or less "ideal" instrument. Appendix B contains a new section on tests for microphonics.

Among major revisions which reflect the modern philosophy of design and use of the sound level meter are the following: All reference levels are made to the flat (C) network; A and B networks are made optional; the tolerances on the flat network are tightened somewhat; the tolerances on the indicating instrument are broadened to include ballistic characteristics essentially the same as the VU meter.

Library Work and Documentation, Z39—

Sponsor: Council of National Library Associations

Mrs Anne J. Richter, R. R. Bowker Company, New York, has been named chairman of a subcommittee to work on proposed standards for indexing. Mrs Richter represents the Special Libraries Association on the committee.

Fundamentals of Performance of Effluent Air and Gas Cleaning Equipment, Z74—

Sponsor: The American Society of Mechanical Engineers

This newly organized project held its first meeting February 7 at the ASME offices, New York. Dr Allen D. Brandt, Industrial Hygiene Engineer, Medical Department, Bethlehem Steel Corporation, Bethlehem, Pa., is chairman.

Standards Outlook

by Leo B. Moore

Standard Definitions

What is your definition of the terms that are used in the standardization field?

This is one query that I am asking more and more frequently in conversations and correspondence with standards engineers. I now have an accumulation of assorted definitions and am anxious to have others in order to find valid words that will convey true meaning and understanding to the minds of those who should know more about the field.

Several things have caused me to realize that one of the reasons why top management may have difficulty in comprehending the concepts and practices of standardization may be our inability to express these concepts through meaningful words. Certainly the indescriminate use of the word "standard" does not make the job easier. The variety of ideas that are inherent in the field does not help either. From the definition that I now have, it is apparent that we are in a dilemma similar to that of trying to describe a corkscrew without using our hands.

The last and most complete effort to tackle this standards problem was an article written and published by S. P. Kaidanovsky in the Winter 1948 edition of the *Standards World*. Title of the article was "Standards Terms Defined." These definitions and those given in the dictionary and encyclopedia probably are the best means of describing the terms commonly used in the field, but it is evident that some variation in ideas has crept in. Perhaps the state of the art has advanced far enough now so that additional notions should be included somewhere in a treatment of these words.

The dictionary at present defines a standard as an accepted or established rule or model. It likewise includes in the definition of standardize (standardization) the two separate concepts that reduce to and compare with a standard. In essence this means that the same word is employed to indicate that a standard is either being developed or being used. This may not be confusing to standards engineers but it might be a little vague to the members of top management. Certainly extra words are immediately needed to present each separate activity clearly to someone not familiar with the field.

Lexicographers apparently use a simple technique for preparing acceptable definitions. They seek the definitions of those in the field and combine their ideas into an edited version that is then tested for acceptability. While it is not my firm intention to change any definitions, I am keenly aware of the need for students to have clearer meanings for standards terms. To that end, I ask for and would welcome any definitions now accepted and used by standards engineers. The dictionary technique of combining ideas might lead to some interesting new ways of saying the things we believe in. I shall, of course, be happy to report back the results of this effort, especially if they tend to improve the situation.

•

Mr Moore is Assistant Professor of Industrial Management at Massachusetts Institute of Technology where he teaches a full-term course in industrial standardization.

NO CONFUSION

in interpreting technical drawings when you use

American Standard Graphical Symbols

A uniform language to help engineers, architects, contractors, drafting rooms

Now Available

American Standard Graphical Symbols for Plumbing, Y32.4-1955, $1.00

Prepared by a committee of engineers, architects, plumbing contractors, plumbing equipment manufacturers. Recommended for approval as American Standard by ASA Sectional Committee Y32. Sponsors—American Institute of Electrical Engineers; The American Society of Mechanical Engineers.

- *Provides* a standard method of indicating plumbing fixtures and allied items on drawings.
- *Emphasizes* clarity and simplicity.
- *Recommends*—Simple symbol lettered on plan. Specific equipment described in specification.

Other American Standards in the Series for Technical Drawings

Drawing and Drafting Room Practice, Z14.1-1946	$1.50
Abbreviations for Use on Drawings, Z32.13-1950	1.25
Graphical Symbols for Electrical Diagrams, Y32.2-1954	1.25
Graphical Symbols for Railroad Use, Z32.2.5-1950	.75
Graphical Symbols for Heat-Power Apparatus, Z32.2.6-1950	.50
Graphical Symbols for Welding, Z32.2.1-1949 R1953	.50
Graphical Symbols for Pipe Fittings, Valves, and Piping, Z32.2.3-1949 R1953	.50

Department MS 100
American Standards Association
70 East 45 Street, New York 17

Please send me (Check enclosed..... Bill me.....)

No. of copies		No. of copies	
.....	Y32.4-1955, $1.00	....	Z32.2.5-1950, $.75
.....	Z14.1-1946, 1.50	....	Z32.2.6-1950, .50
.....	Z32.13-1950, 1.25	....	Z32.2.1-1949, .50
.....	Y32.2-1954, 1.25	....	Z32.2.3-1949, .50

..... Complete sets at $6.00 per set

Name .....

Company..... Street.....

City..... Zone..... State.....